



Career Development & Occupational Studies

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NOTE: This document is a work in progress. Parts II and III, in particular, are in need of further development, and we invite the submission of additional learning experiences and local performance tasks for these sections. Inquiries regarding submission of materials should be directed to: The Career Development & Occupational Studies Resource Guide, Room 681 EBA, New York State Education Department, Albany, NY 12234 (tel. 518-474-5922).



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Over the last decade, more and more businesses have begun to look for a similar kind of worker. In addition to things that employers have always looked for — reliability, a positive attitude, and a willingness to work hard — these employers now look for hard and soft skills that applicants wouldn't have needed 20 years ago:

- the ability to read at the ninth-grade level or higher
- the ability to do math at the ninth grade level or higher
- the ability to solve semistructured problems where hypotheses must be formed and tested
- the ability to work in groups with persons of various backgrounds
- the ability to communicate effectively, both orally and in writing
- the ability to use personal computers to carry out simple tasks

Richard J. Murnane & Frank Levy
“Teaching the New Basic Skills”



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Workplace experiences can provide the setting for addressing authentic problems and a clear connection to “value outside the classroom.” Using the workplace to teach academic skills can also be a motivational tool for students, showing them how their academic skills can be used outside of the classroom.

Fred Newman & Gary Wehlage
 Center on Organization and Restructuring of Schools

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I believe that a career tomorrow will most likely consist of a dozen jobs, on and off payrolls of large and small firms in two or three industries.

Tom Peters
“In Search of Excellence”



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Most of us, whether we like it or not, face a future of self-managed portfolio careers, including a variety of part-time, temporary, or seasonal work combined with work as independent contractors, consultants, and small business owners.

Dixie Darr, Editor
“The Accidental Entrepreneur”

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Standard 2: Integrated Learning

Classroom Examples

The following classroom lessons are examples of ways to integrate the skills and competencies found in Career Development and Occupational Studies into instruction in other subject areas. The lessons were developed by a committee of practitioners in the Spring of 1997.

Standard 2 — Integrated Learning

Intermediate Examples

WRITING DIRECTIONS

In this timed activity, groups of three students will write directions from one point in the school building to another and exchange their directions with another group who must identify the destination.

English Language Arts: Standard 1 – Language for Information and Understanding

Career Development

- investigate occupations where following and giving directions is important
- identify occupations in which there is a need to know a specific sequence
- communicate a process in writing clearly and accurately
- meet a deadline

Workforce Applications

- work together as a team to meet a deadline
- apply writing, reading, and problem-solving skills
- understand the importance of organization and accuracy when writing out a process

Universal Foundation Skills

- use basic skills needed by those dependent on sequence / directions (e.g., doctors, pharmacists, scientists, auto mechanics)
- plan, organize, and take independent action
- manage information obtained from other people and communicate the information in an appropriate format

Career Majors

Arts/Humanities

- apply technical writing skills

Business/Information Systems

- compose and produce a simple business document
- write technically for both employees and customers

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THE NATIVE PEOPLES

Students will examine work practices necessary for the survival and prosperity of the Native Peoples and make connections to modern workforce values.

Social Studies: Standard 1 - History of the United States and New York

Career Development

- identify responsibilities of each family tribal member
- describe skills necessary for successful completion of tribal jobs
- work and interact with people, information, and/or things to achieve common goals and outcomes

Workforce Application

- acquire leadership skills required to lead the tribal unit
- understand the importance of cooperation among tribal members to maintain the strength of the tribe
- develop specialty skills, (e.g., weaving, quillwork, beadwork, pottery making, stone working, hunting, and tanning) that are necessary for survival of the culture
- apply skills and strategies necessary for trading procedures

Universal Foundation Skills

- use various communication processes (e.g., sign language, symbols, dance, oral story telling) to deliver thoughts and ideas
- use problem-solving strategies to determine the most effective means of survival through the respectful use of resources

- work cooperatively as a unit to strengthen the culture and maintain tribal rituals, customs, and traditions
- use effective strategies to resolve conflicts within the tribal community
- apply problem-solving techniques to learn to survive natural forces (e.g., climate, disease, famine, drought)
- plan strategies to defend against invasions by competing tribal units and settlers

Career Majors

Business/Information Systems

- plan, deliver, and interpret oral, nonverbal, and written communication indicators within and outside of the tribal unit
- recognize and allow for cultural similarities and differences within other Native American cultures
- organize, plan, and implement successful trade agreements

Health Services

- identify causes of diseases, plan effective healing strategies, and deliver health care procedures and medicine (herbs, plants, etc.)
- plan strategies to prevent illness and/or injury

Engineering/Technologies

- use natural materials and tools to carry out daily responsibilities
- apply decision-making/problem-solving processes to develop solutions for disputes among tribal members and encounters with other groups

THE NATIVE PEOPLES, continued

- plan and create a visual representation of a village—shelters, council house, planting areas, etc.

Human and Public Services

- demonstrate effective communication skills to deliver a clear, concise message
- work cooperatively within a tribe
- balance family roles and tribal roles
- identify and maintain items that will serve as a monetary system
- establish dwellings within an environment that is safe for tribal members and offers abundant supplies of food, water, and firewood
- solve problems, set specialized skill goals, and make decisions to allow for optimum survival of tribal members

Natural and Agricultural Sciences

- demonstrate effective use of natural resources to satisfy needs for food, clothing, shelter, tools, weapons, safety, etc.
- demonstrate a knowledge of natural occurrences (e.g., phases of the moon, seasonal changes, animal life cycles, tidal changes, etc.) and use this knowledge to plan and implement fishing, hunting, and gathering practices
- demonstrate a working knowledge of tribal rituals
- utilize basic agricultural principles to create optimal conditions for plant and animal growth
- interact with tribal members in a council meeting to discuss and solve agricultural issues

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[Teachers] are focusing on more challenging and exciting kinds of learning, helping students to actively construct, use, and generate their own knowledge. . . . They are creating communities of learners engaged in research and reciprocal teaching that empower students to seek their own answers and pose their own questions.

Linda Darling-Hammond 1996
Columbia University

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HEALTH PRODUCT

Working in cooperative groups, students will use knowledge of health, healthy foods, and personal choices to create and market a health product.

Health Education: Standard 3 – Health, Physical Education, and Family and Consumer Sciences

Career Development

- explore occupations related to marketing/advertising
- explore occupations related to health careers
- explore education needed to work in marketing/advertising, production of goods, and various health-related careers

Workforce Applications

- develop an ability to assess information for validity
- work in cooperative groups to develop a product
- gather and make use of available resources
- apply previous knowledge to project

Universal Foundation Skills

- prepare and give oral presentation to class
- delegate roles and demonstrate self-management within groups
- work to meet a deadline
- understand the need for cooperation in accomplishing goals

Career Majors

Business/Information Systems

- create, develop, and present a product
- set goals and deadlines independently
- demonstrate ability to work independently and within a small group

Engineering/Technologies

- construct product and design advertising layout
- make appropriate use of computers and software as appropriate to create a product and advertisement

Health Services

- develop knowledge of the concept of optimal health
- identify factors that affect health maintenance

Human and Public Services

- describe how advertising can positively and negatively affect a health product and the community
- discuss the ethical responsibilities of the advertising industry to the public

ENVIRONMENTAL CONSERVATION

Students will begin to consider personal responsibilities and goals for environmental protection and management.

Social Studies: Standard 3 – Geography

Career Development

- work with people, information, and things
- develop interests, aptitudes, and abilities that will lead to making informed environmental decisions
- plan and achieve immediate personal goals
- make decisions to distinguish needs versus wants
- begin to consider a potential career plan within the environmental field
- examine the role of public service
- examine the role of the volunteer to promote an environmental cause

Workforce Applications

- set short- and long-term goals
- use interview techniques to gather information that shows how society utilizes and depends upon natural resources
- apply academic knowledge of math, science, and language arts
- work as a team member to achieve effective environmental practices
- demonstrate leadership skills in initiating environmentally sound practices
- examine global competition that interferes with worldwide environmental conservation
- respect the need for economic growth while recognizing excessive resource utilization

Universal Foundation Skills

- interview a person in the environmental field to obtain knowledge that supports the importance of environmental awareness
- acknowledge the responsibility of community members and leaders
- debate environmental issues
- cooperate to achieve a goal

- serve as role models for wise environmental practices
- obtain data-use charts and graphs to show evidence of resource depletion
- implement a planned activity
- research environmental laws
- create advertisements that promote environmental causes
- explore the need for resource management
- develop an oral presentation with visual aids supporting an environmental issue

Career Majors

Business/Information Systems

- develop steps to follow in achieving goals
- develop charts and graphs that support the need for global awareness of environmental issues
- use technology to create and distribute written communications that persuade the consumer to protect, manage, and conserve natural resources

Health Services

- identify health and safety practices needed to ensure a clean and abundant water supply, clean air, and fertile farmland

Engineering/Technologies

- use laboratory equipment and tools effectively (e.g., microscope and slides) to examine water and soil samples and determine evidence of pollutants

Human and Public Services

- advocate sustainable practices that protect the quality of the environment within the community

Natural and Agricultural Sciences

- identify agricultural practices that directly affect the quality of natural resources, i.e., water, air, soil, forests
- explain the moral and legal responsibilities of society in protecting, conserving, and managing natural resources

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BUDGETING

Working in teams and as individuals, students will make a budget and learn about personal financial management using career research and grade-appropriate math skills.

Mathematics, Science, and Technology: Standard 3 – Mathematics

Career Development

- develop an understanding of the skills necessary for various financial management occupations
- connect employment to achievement of personal financial goals

Workforce Applications

- gain understanding of the use of computers in personal finance and in the workplace
- make use of available resources for financial planning
- cooperate in teams to develop accurate budgets

Universal Foundation Skills

- apply and speak in mathematical terms
- use problem-solving skills to balance budgets
- demonstrate an ability to work in teams

Career Majors

Business/Information Systems

- manage financial and technological resources
- work in teams to produce an accurate product

Engineering/Technologies

- develop an understanding of the use of spreadsheets in personal budgeting
- develop an understanding of the use of computers and other technology in various occupations

Human and Public Services

- set personal and family financial goals
- understand the importance of career to family and society

CREATIVE WRITING CHALLENGE

In groups of three, students will create a story, including a cover and two pictures, to be presented to second grade students. Students will work together, meet a deadline, write creatively, and write for a specific audience.

English/Language Arts: Standard 2 – Language for Literary Response and Expression

Career Development

- explore occupations related to writing, speaking, and being creative
- understand the importance of meeting deadlines
- acknowledge the relationship between quality work and individual skill and interest
- explore individual interests, aptitudes, and abilities (e.g., writing, speaking, and creative thinking)
- write for a specific audience

Workforce Applications

- work together as a team to meet a deadline
- apply writing, speaking, creative thinking, and art skills
- organize a presentation for a specific audience
- use technology for writing

Universal Foundation Skills

- exhibit interpersonal skills for group work and presentation
- plan, organize, and take independent action
- set deadlines for completion of a task

Career Majors

Business/Information Systems

- demonstrate basic leadership abilities/skills
- function effectively as members of a work group

Human and Public Services

- solve problems, set goals, and make decisions in order to meet a deadline

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... education through occupations consequently combines within itself more of the factors conducive to learning than any other method.

John Dewey
Democracy and Education

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PERSUASIVE ESSAY/DEBATE

In groups of four, students will try to persuade an audience to side with their viewpoints, by researching a controversial issue; forming an opinion for debate purposes; submitting an essay and presenting their opinion orally.

English/Language Arts: Standard 3 – Language for Critical Analysis and Evaluation

Career Development

- investigate occupations in which there is a need to persuade others through writing and/or through oral debate
- understand importance of forming an educated, intelligent opinion through research
- explain effectively the rationale for an opinion

Workforce Applications

- work together as a team
- apply written and oral communication skills
- support opinion through research
- form an opinion after listening to all possible sides

Universal Foundation Skills

- possess skills needed by writers and speakers
- persuade others through explaining rationale for opinion effectively
- plan, organize, and take independent action
- use interpersonal and reasoning skills to form an educated opinion
- apply listening and interpreting skills to form an opinion

Career Majors

Business/Information Systems

- prepare and present an opinion formed through research
- use appropriate language for audience

Human and Public Services

- demonstrate listening skills and written and oral communication skills
- demonstrate how to interact effectively and sensitively with others

SKYSCRAPERS

In groups of three or four, students will use the computer to design/model an earthquake-proof skyscraper.

Mathematics, Science, and Technology:

Standard 4-Science

Standard 5-Technology

**Standard 6-Interconnectedness:
Common Themes**

Career Development

- describe occupations involved in building and design
- identify interest, aptitudes, and abilities in mathematics, science, technology, and construction
- be knowledgeable about environmental factors
- set goals and meet objectives

Workforce Applications

- read and understand simple blueprints
- know simple architectural designs/concepts
- use a computer to create a model
- understand the importance of accuracy
- explore ways geometry is used in everyday life

Universal Foundation Skills

- read, write, and follow a series of directions
- evaluate facts, solve problems, and make decisions by applying logic and reasoning skills
- use interpersonal skills in order to sort facts, listen to dissenting points of view, and research a common decision
- use technology to complete a task

Career Majors

Business/Information Systems

- work with a team or a group to take an idea and follow a step-by-step process to build a final product

Engineering/Technologies

- apply simple architectural and construction concepts to design an earthquake-proof skyscraper
- use a computer to simulate an earthquake
- demonstrate a basic understanding of troubleshooting

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Discovering Integration/Making Connections Among the Standards

The following charts list a sampling of performance indicators, tasks, and standards from several New York State standards. As students work toward the attainment of Career Development and Occupational Studies Standards, they may demonstrate their knowledge and skills in tasks which are undertaken in other disciplines.

In the same manner, students may demonstrate knowledge and skills in mathematics, science, and technology, or in English language arts, the Arts, languages other than English, etc., standards in tasks and activities which take place in career development classes. The integration of tasks and activities from several content areas suggests and encourages collaboration at all levels and in all disciplines on the part of teachers.

Performance Indicators	Tasks & Activities	Standard
demonstrate the integration and application of academic and occupational skills in their school learning, work, and personal lives. Career Development Standard 2, Commencement level	▲ write a review of a technical manual from the perspective of current industry standards	English Language Arts, Standard 3, Commencement level, Speaking and Writing
	▲ investigate and select a computer program for use in designing floor plans and elevation drawings for a set design	Arts, Standard 2, Commencement level
describe the changing nature of the workplace brought about by global competition and technology Career Development Standard 1, Elementary level	▲ describe through example how technologies can have positive and negative impacts on the environment and on the way people work	Mathematics, Science, and Technology, Standard 5, Elementary level
	▲ . . . explain the effects of international trade on the American economy	Social Studies, Standard 4, Elementary level
evaluate facts, solve advanced problems, and make decisions by applying logic and reasoning skills Career Development Standard 3a, Intermediate level	▲ estimate the number of students who might choose to eat hot dogs at a picnic	Mathematics, Science, and Technology, Standard 3, Intermediate level
	▲ use the criteria of scientific investigation to evaluate the significance of a lab experiment	English Language Arts, Standard 3, Intermediate level, Listening and Reading

Performance Indicators	Tasks & Activities	Standard
interact effectively and sensitively with all other members of the health care team in order to provide high-quality client care Career Development Standard 3b, Core level	▲ understand the cultural implications of the spoken language and of the dynamics of social interaction	Languages Other Than English, Standard 2, Checkpoint A
	▲ take part in and conduct meetings of student organizations	English Language Arts, Standard 4, Commencement level, Listening and Speaking
understand the kinds of resources available in their community and make informed decisions related to their own use Health, Physical Education, Family and Consumer Science Standard 3, Elementary level	▲ explain the resources needed to build a simple item (e.g., foot-stool, sandbox)	Career Development, Standard 3a, Elementary level
	▲ identify common skills important for success in the workplace and relate them to personal strengths and areas in need of improvement	Career Development, Standard 1, Elementary level
apply algebraic and geometric concepts and skills to the solution of problems Mathematics, Science, and Technology Standard 1, Commencement level	▲ use mathematical concepts to calculate fuel consumption for a planned flight	Career Development, Standard 3b, Experiential level
	▲ conduct research, prepare a chart, and make a presentation about the sales volume and market share for a local business	Career Development, Standard 3b, Experiential level
know the role of economics in society, politics, and culture Social Studies Standard 4	▲ identify and explain social, organizational, economic, business, and technological systems that stimulate the transition from an agriculture-based economy to a service-, information-, and technology-based economy	Career Development, Standard 3b, Core level
	▲ describe the American free enterprise system and its effect on the health care system	Career Development, Standard 3b, Specialized level
express ideas and concerns clearly and respectfully in conversations and group discussions English Language Arts Standard 4 Intermediate level	▲ work cooperatively in group situations and analyze the importance of using collective abilities in achieving group goals and objectives	Career Development, Standard 1, Intermediate level
	▲ interact with other students in a meeting to discuss an agricultural topic	Career Development, Standard 3b, Intermediate level

Career Majors

Nationwide school reform efforts have prompted many school systems to consider multiple paths to better prepare students for life after high school. Career-oriented programs represent one pathway that provides useful and valuable educational experiences for all students. The current reform environment intends to integrate academic content within traditional high school occupational education programs. At the same time, career major programs address the need to provide real-world practical applications with academic content. Students who perform well on tests and classroom assignments also need to develop the ability to apply academic concepts to practical problems. The increasing number of jobs requiring post-high school education makes it mandatory that schools prepare students to be successful at one or more postsecondary levels (certificate, two- and/or four-year college level). Career majors are viewed as a way to link academic and occupational education within the reform framework and to increase standards. In New York State, the Departments of Education, Labor, and Economic Development were initially responsible for defining and recommending career major options published in the *Preliminary Draft Framework for Career Development and Occupational Studies*. The six career clusters include:

- Arts/Humanities
- Business/Information Systems
- Engineering/Technologies
- Health Services
- Human and Public Services
- Natural and Agricultural Sciences

GUIDING PRINCIPLES

Career Majors:

- combine the best of traditional academic and workplace competencies in order to prepare every participating student for employment, further education, and a lifetime of learning;
- provide a cohesive instructional program that organizes courses and content on the career clusters;
- are interdisciplinary by nature and, therefore, call for the integration of occupational and academic content to prepare students for immediate employment or postsecondary study;
- prepare students for a lifetime of learning by promoting high academic standards along with learning in a context of productive applications;
- deliver a broad, general preparation for business, management, and professions in a variety of careers;
- are designed to be broad in scope and to enable students to develop knowledge and skills that are transferable to a wide variety of careers;

- afford opportunities for students to learn in a variety of learning configurations; and
- provide students with workplace experiences in shadowing, internships, explorations, and clinical experiences.

WHAT DOES A STUDENT GAIN FROM A CAREER MAJOR PROGRAM?

- ▲ value of real life hands-on applications of academic content
- ▲ broad-based skills and competencies
- ▲ options available in a wide range of careers
- ▲ skills and competencies needed for various careers
- ▲ motivation for further, advanced study
- ▲ learning through different instructional styles

CAREER MAJOR DESCRIPTORS

ARTS/HUMANITIES:

prepares individuals through composition, symbolic representation, and a variety of communications techniques to create, perform, and conduct literary, artistic, entertainment, and athletic activities.

Sample occupations: editor, choreographer, composer, graphic designer, interior designer, dancer, journalist, and broadcast announcer.

BUSINESS/INFORMATION SYSTEMS:

prepares individuals to perform managerial, research, and/or technical support functions within a public or private organization involving the creation, storage, and retrieval/distribution of information.

Sample occupations: systems analyst, financial manager, database administrator, securities broker, project/general manager, sales/marketing representative, accountant, executive secretary, and administrative assistant.

ENGINEERING/TECHNOLOGIES:

prepares individuals to apply technical knowledge and skills in designing, assembling, inspecting, maintaining, and repairing systems, structures, or products.

Sample occupations: civil engineer, automotive repair (engine/body), air traffic controller, power plant electrician, meteorological specialist, aircraft mechanic, and CAD drafter.

HEALTH SERVICES:

prepares individuals to apply scientific, technical, and social knowledge and skills to assist clients in maintaining health, preventing illness, and diagnosing and treating symptoms.

Sample occupations: physical therapist, dental hygienist, pathologist, dietitian, pharmacist, radiological technician, physician, medical secretary, medical laboratory technician, nurse, occupational therapist, and home health aide.

HUMAN AND PUBLIC SERVICES:

prepares compassionate/nurturing employees to help individuals and families by providing protective services (police, fire safety, and legal), social services (care of the elderly, sick, disabled, poor, and homeless), education and life-long learning (teacher, guidance counselor, and college professor), and community services (postal, sanitation, utilities, and public works).

Sample occupations: police detective, teacher, polygraph examiner, coroner, cook, funeral director, and postal service clerk.

NATURAL AND AGRICULTURAL SCIENCES:

prepares individual to apply technical, scientific, and social skills to produce food and fiber for human needs while assuring a healthy natural environment.

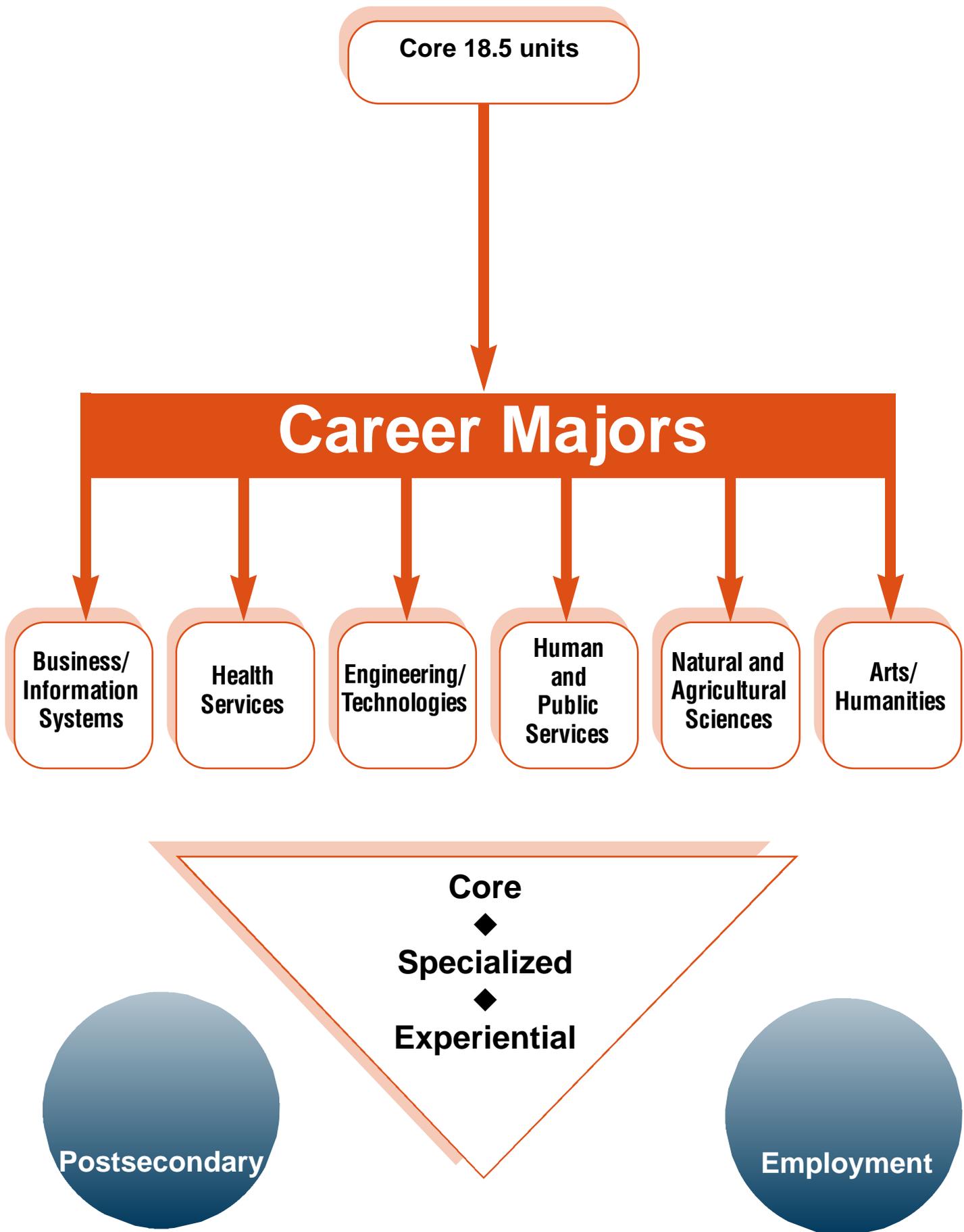
Sample occupations: veterinarian, forest ranger, bio-chemist, meteorologist, commercial fishery, florist, stable hand, pollution control technician, logger, pet shop worker, food inspector, pesticide applicator, landscaper, nursery worker, and farmer.

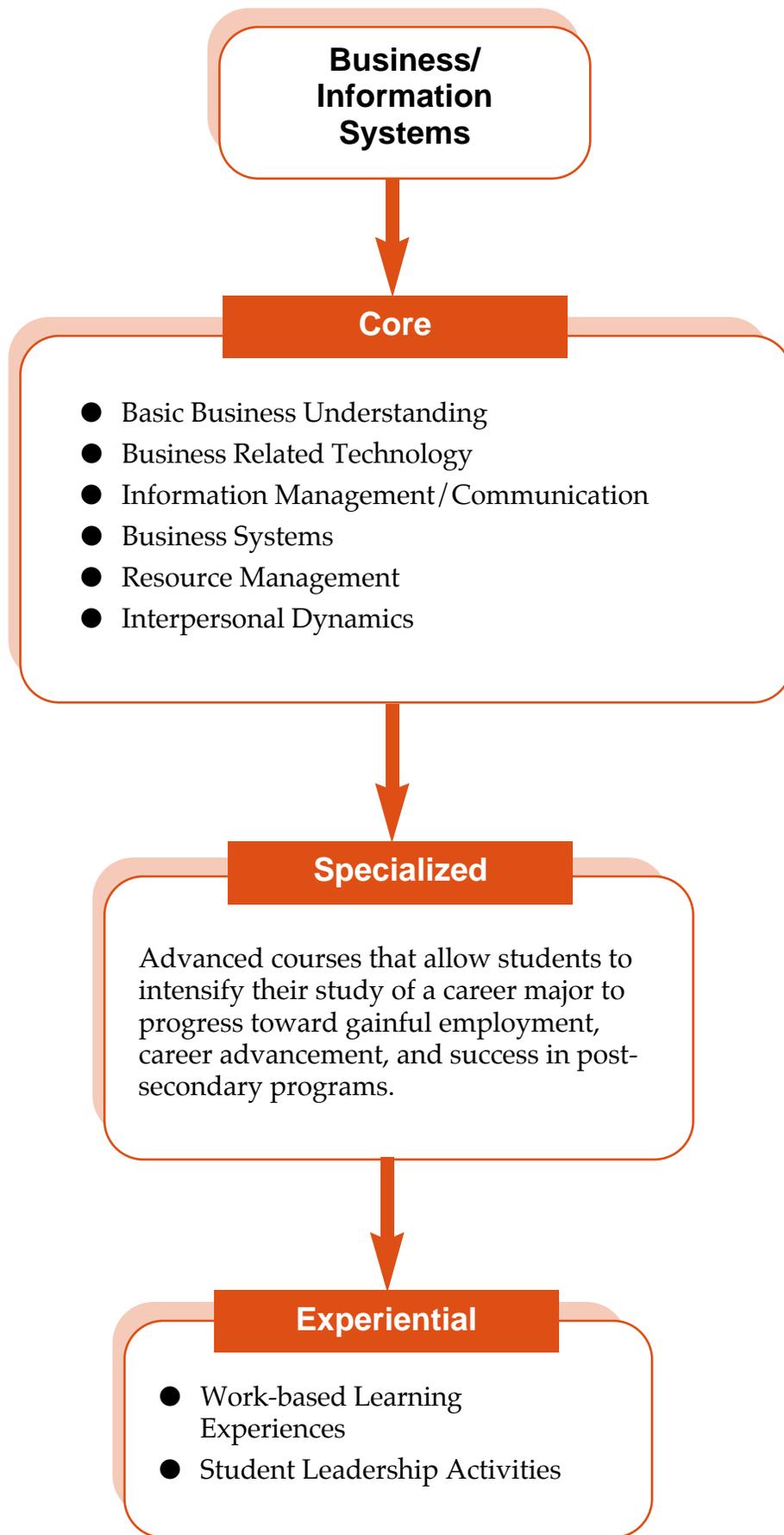
EXEMPLARS:

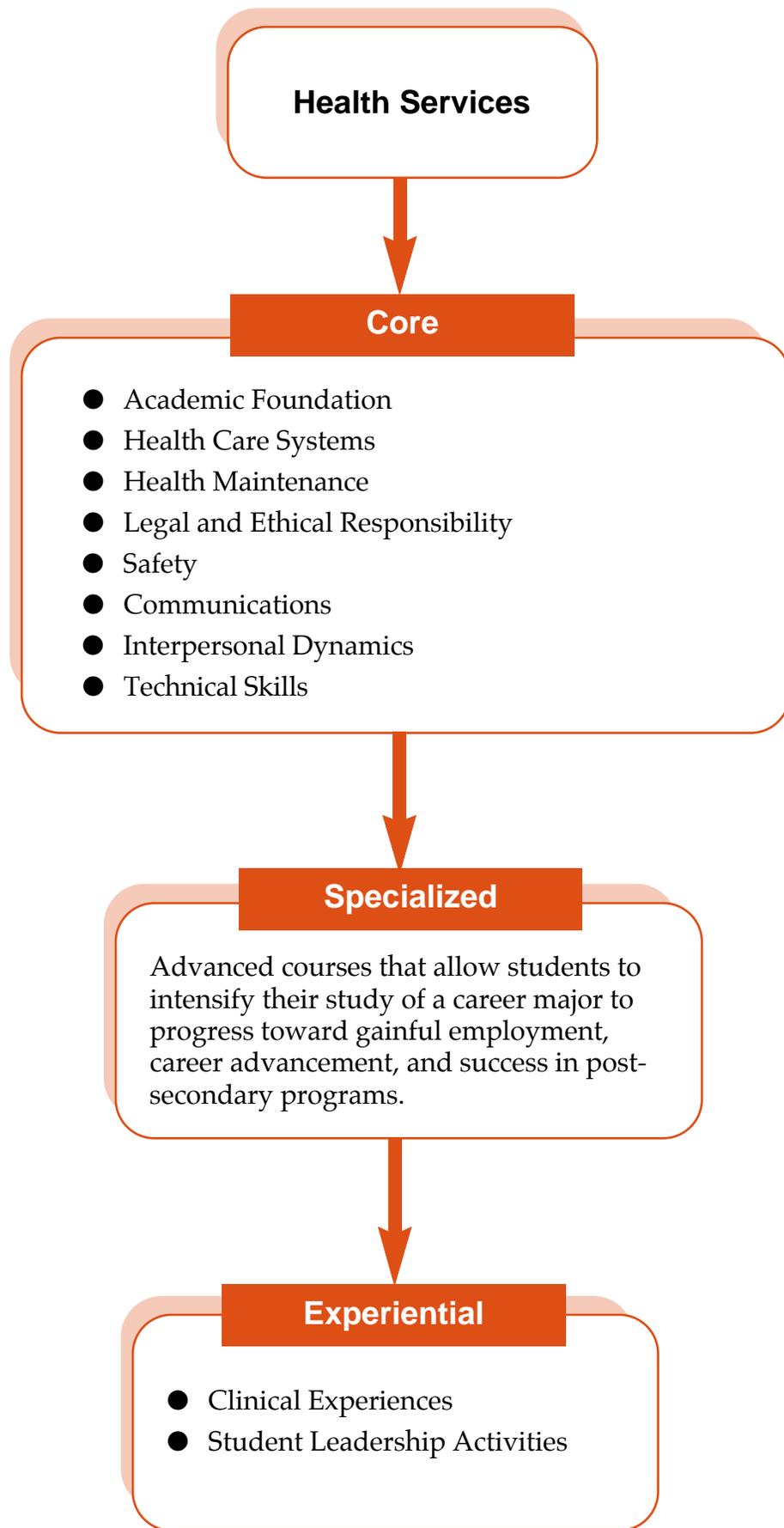
The following illustrations depict the flow of core skills identified in select career major areas and provide models designed to suggest specific programs of study to deliver these skills.

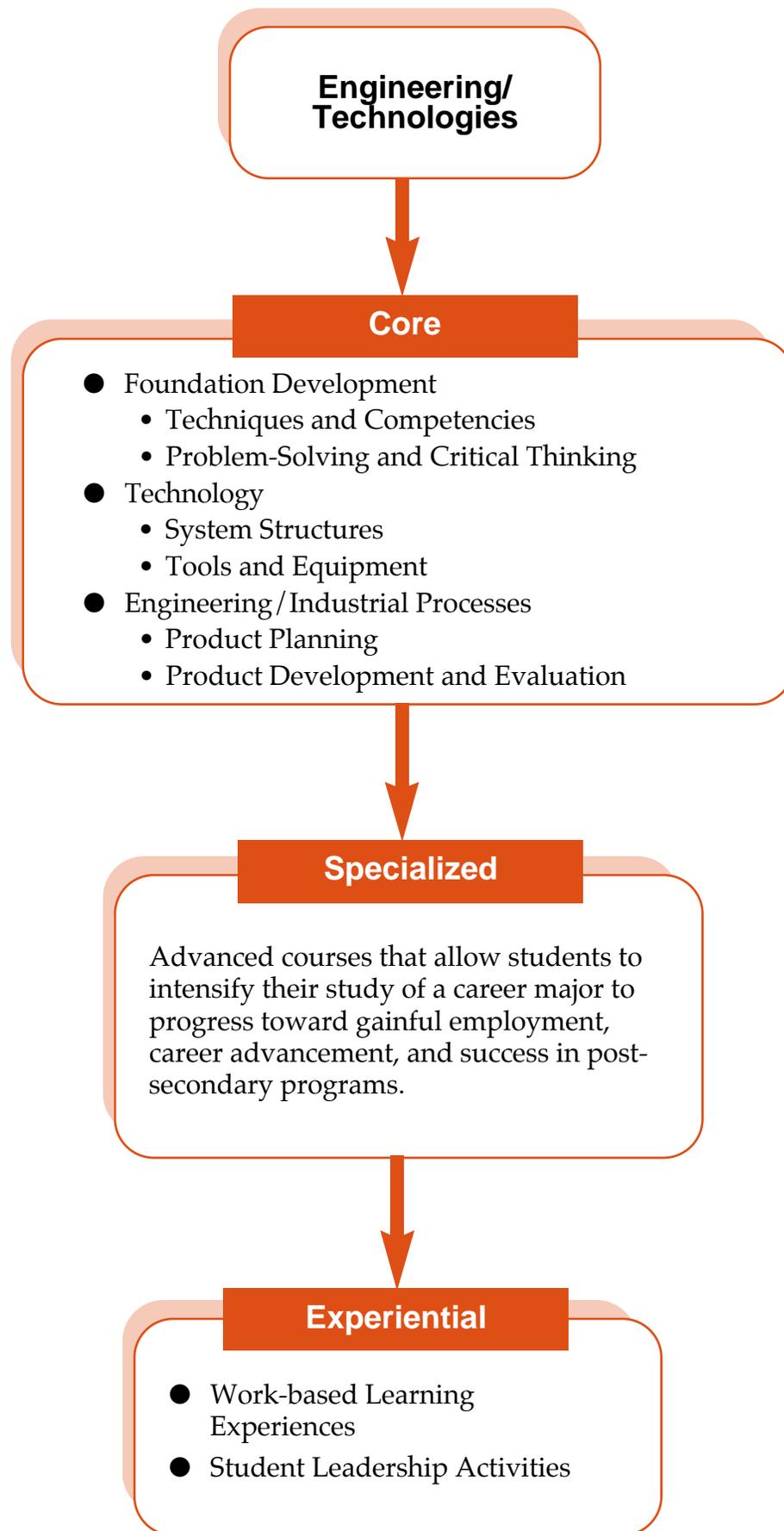
The vertical charts identify key competencies which would generate industry-wide content at three distinct levels of achievement. A student's program of study would determine the instructional intensity and degree of specialization of this content.

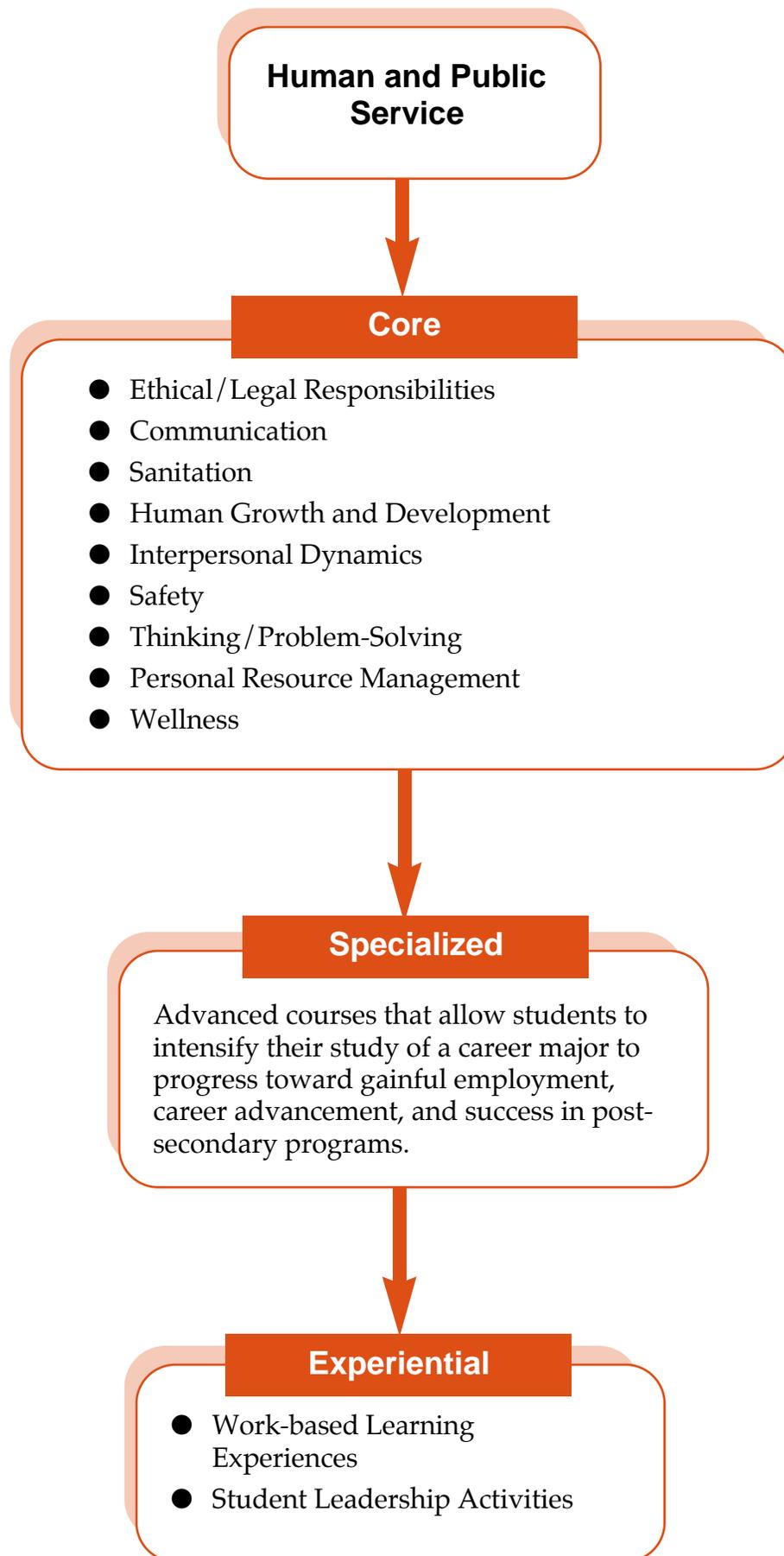
The horizontal charts identify suggested models of instructional programs with combinations of course selections that content would deliver career major skills and knowledge leading to distinct career pathways of immediate employment and/or continuing study at the postsecondary level.

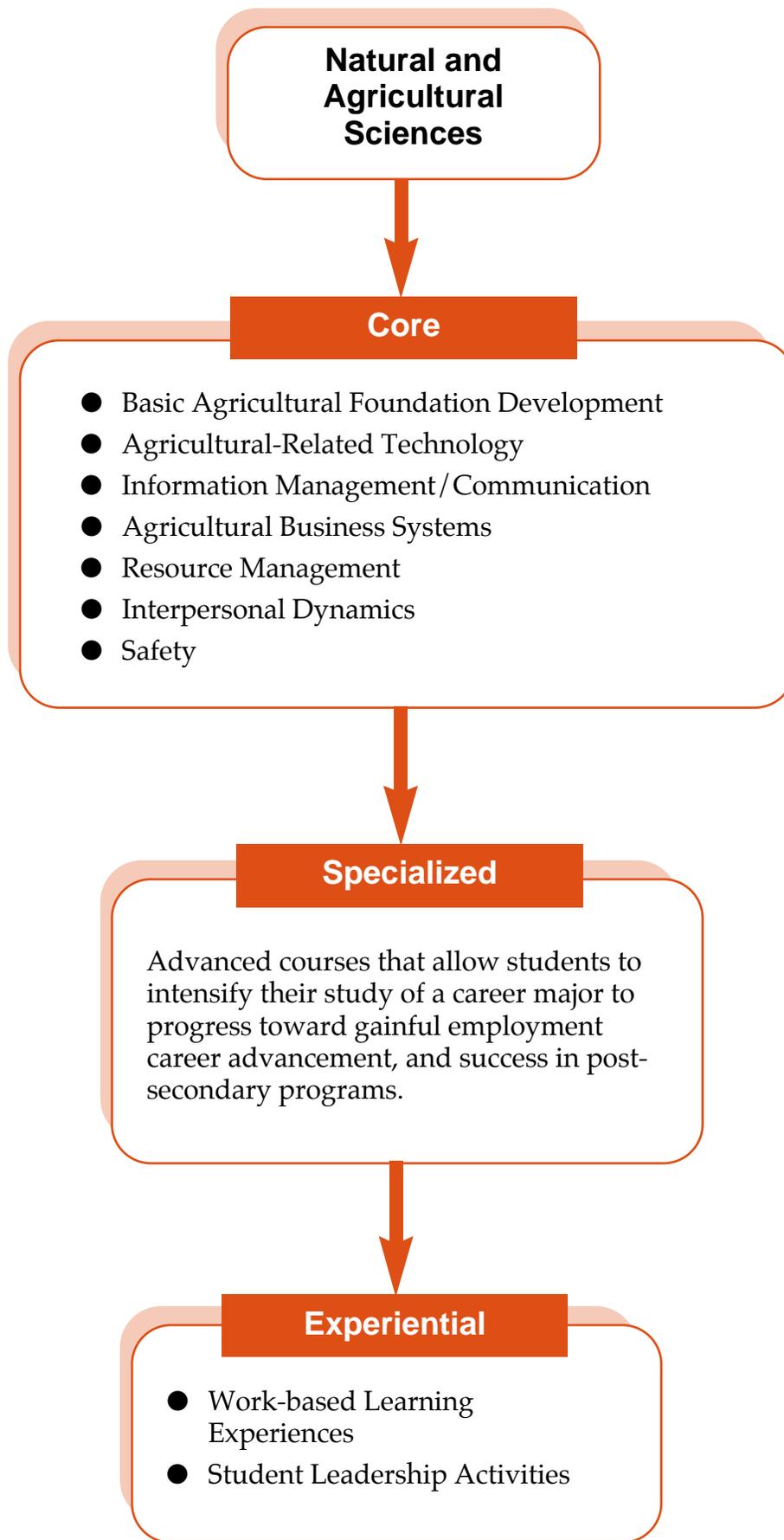


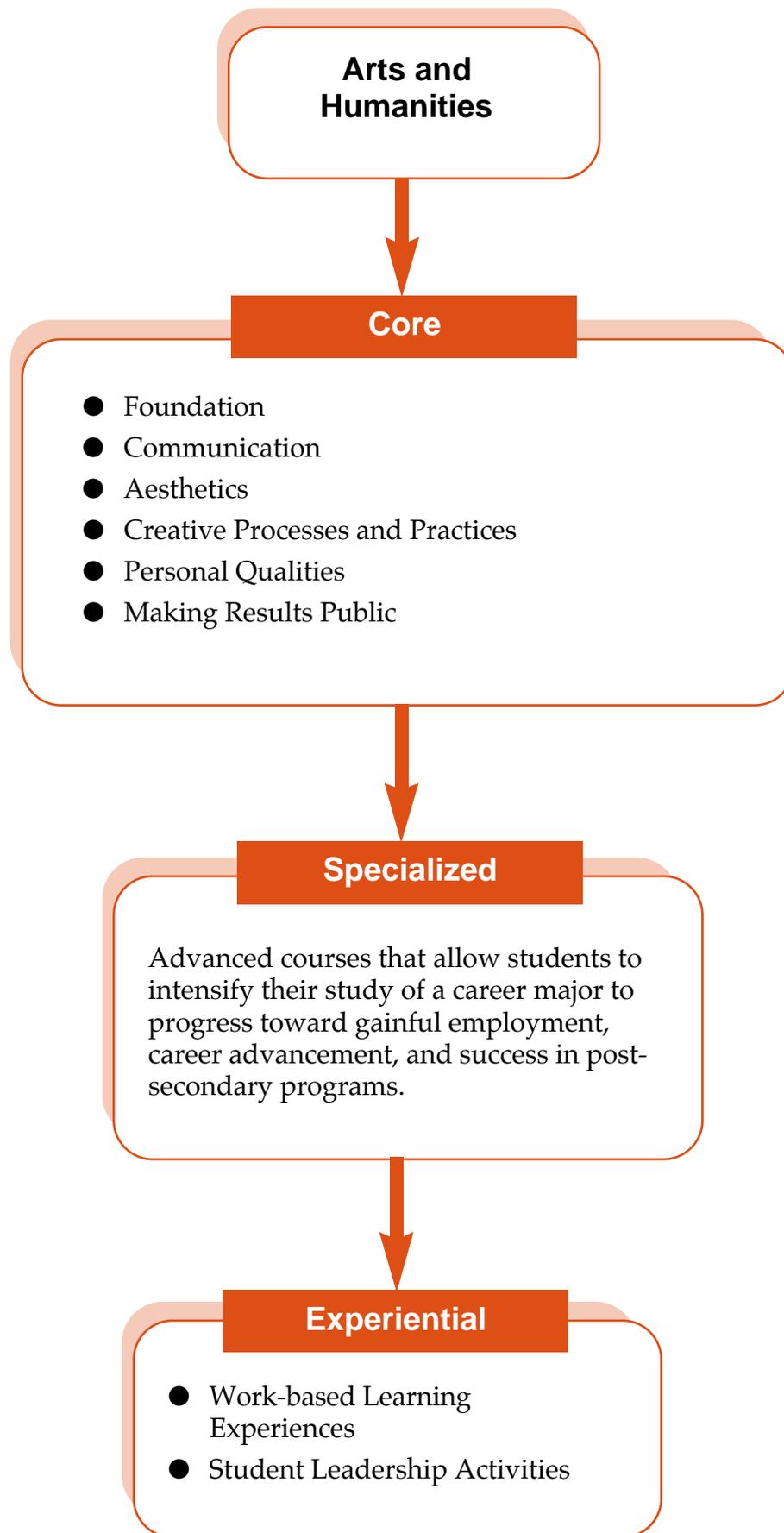












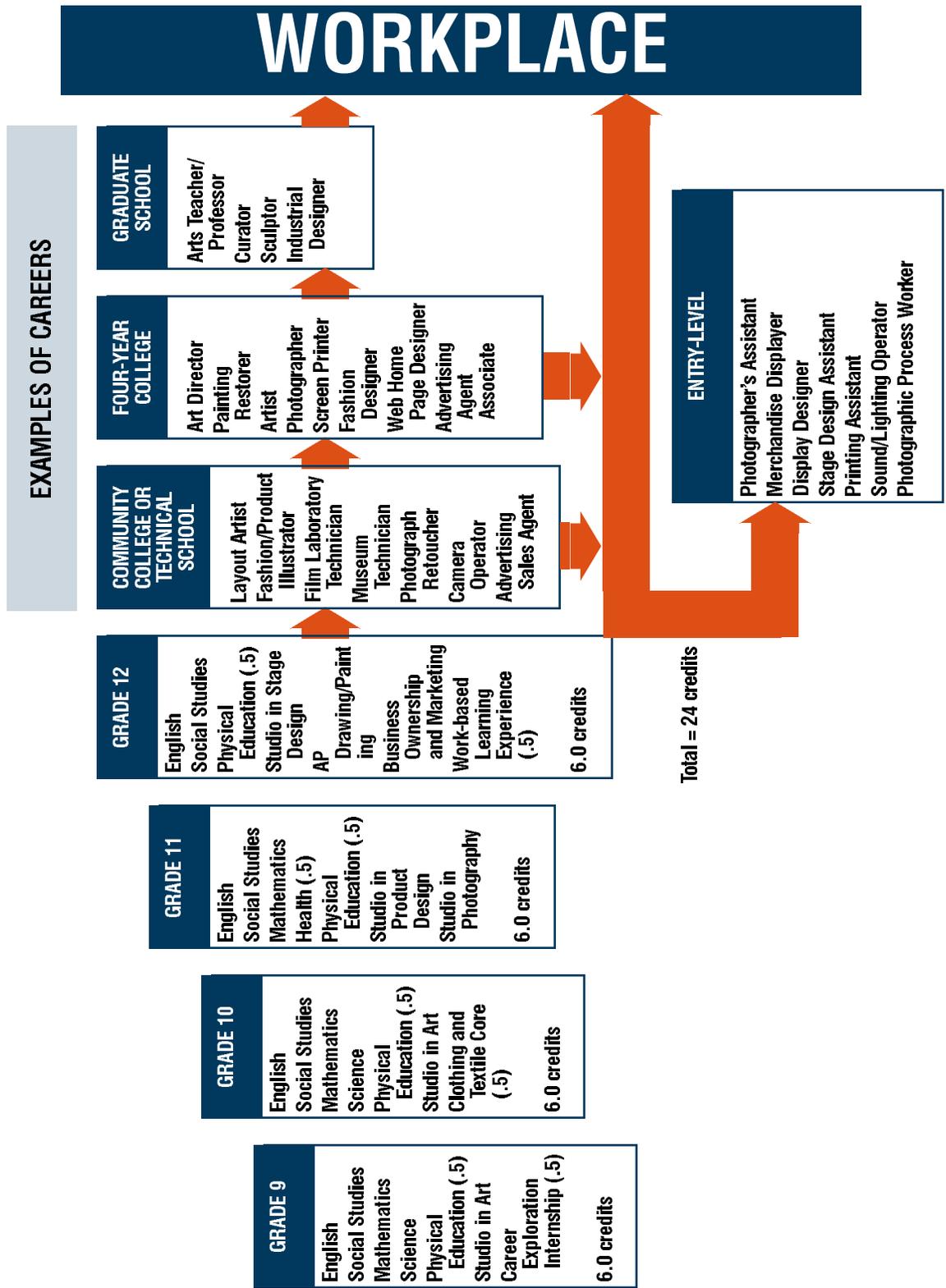
Career Major: Models

Two models for each career major have been developed depicting either a pathway directly to the workforce or to postsecondary study prior to entering the workforce. Because of space limitations, only one model has been included for each career major in this version. Additional models will be available in the print version of this document.

The following charts illustrate a few examples of integrated career major programs. Many other options are possible.

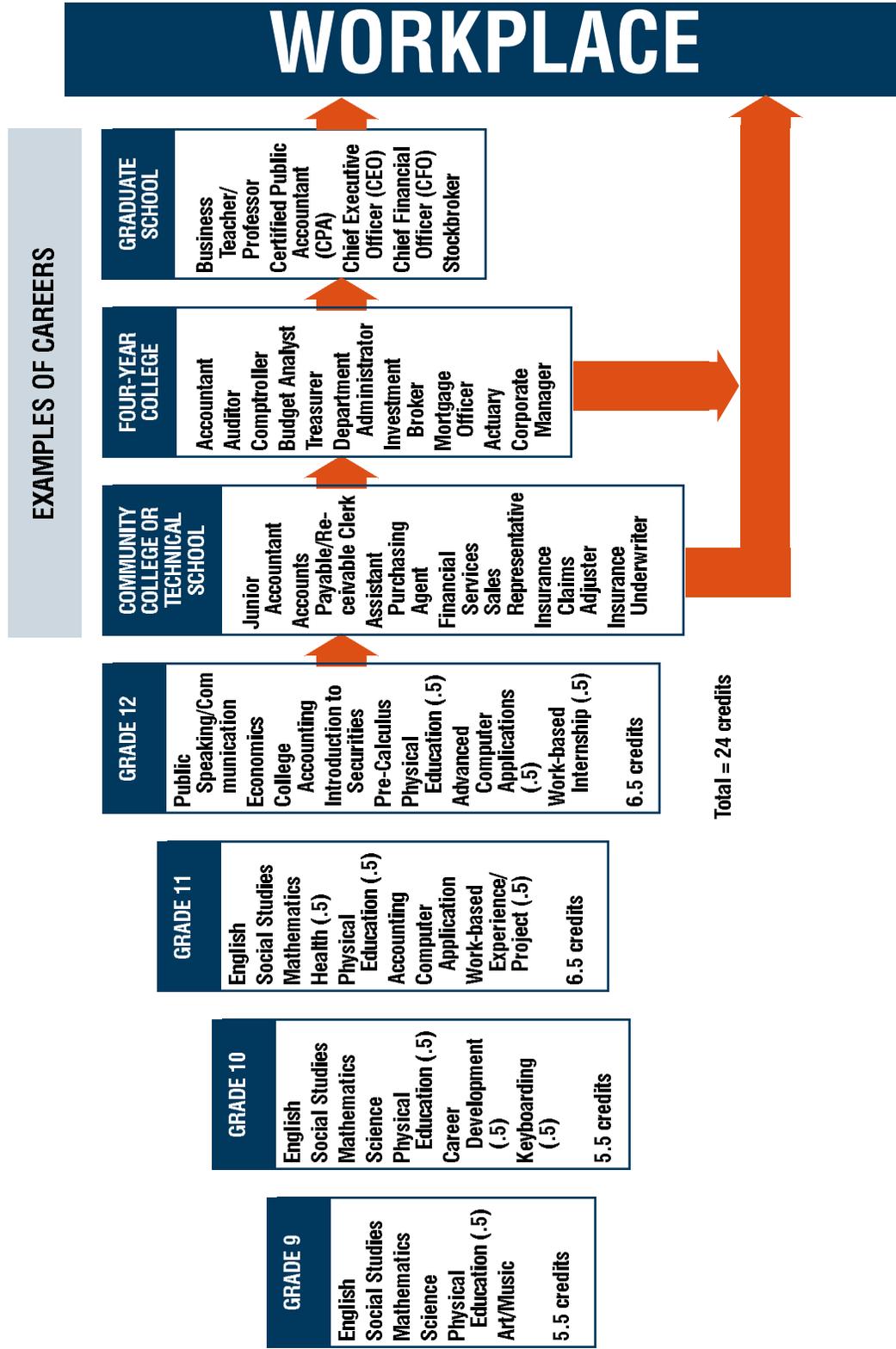
New York State Career Major Area: Arts/Humanities

Sample Four-Year Program



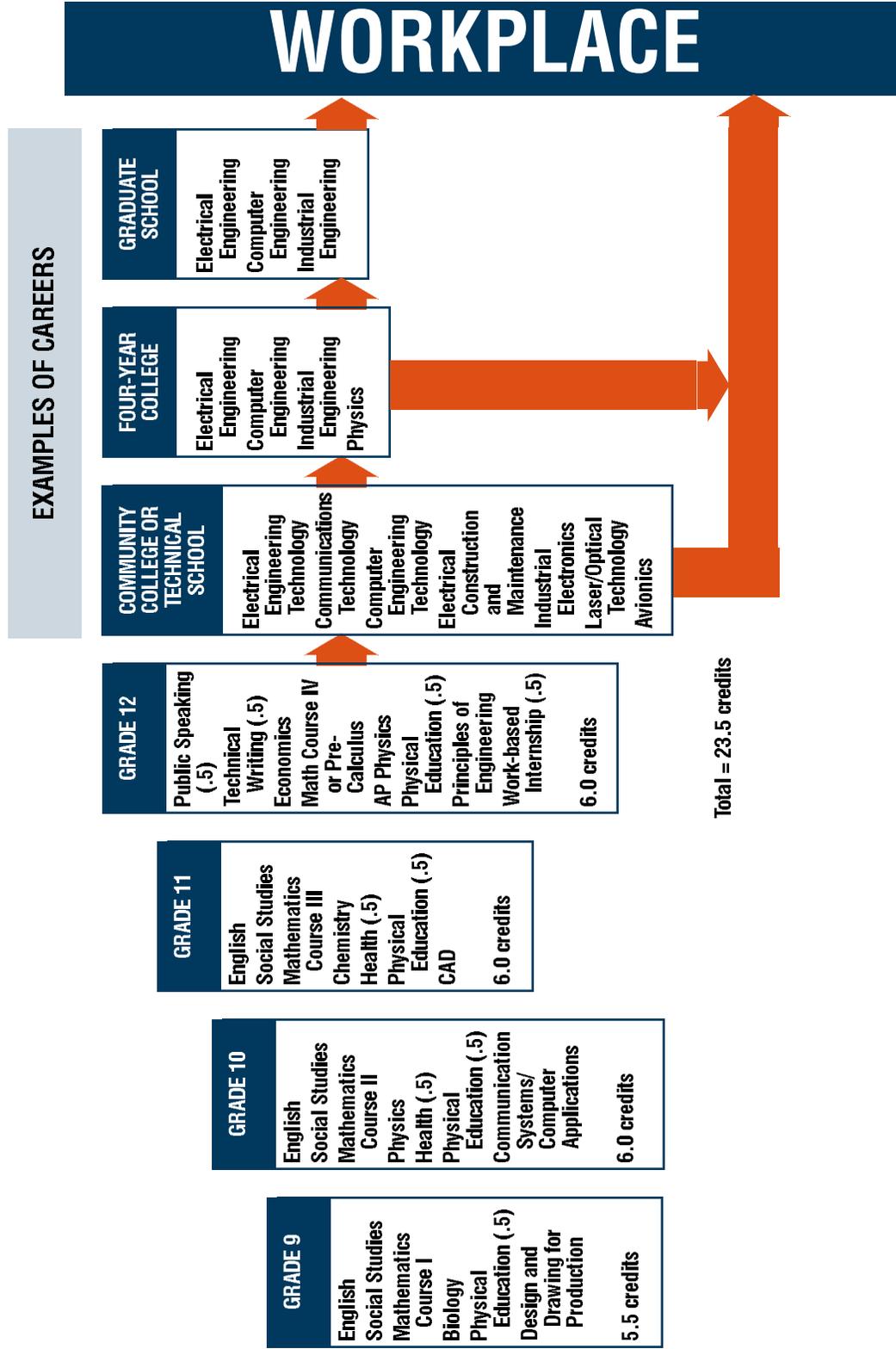
New York State Career Major Area: Business/Information Systems

Sample Four-Year Program



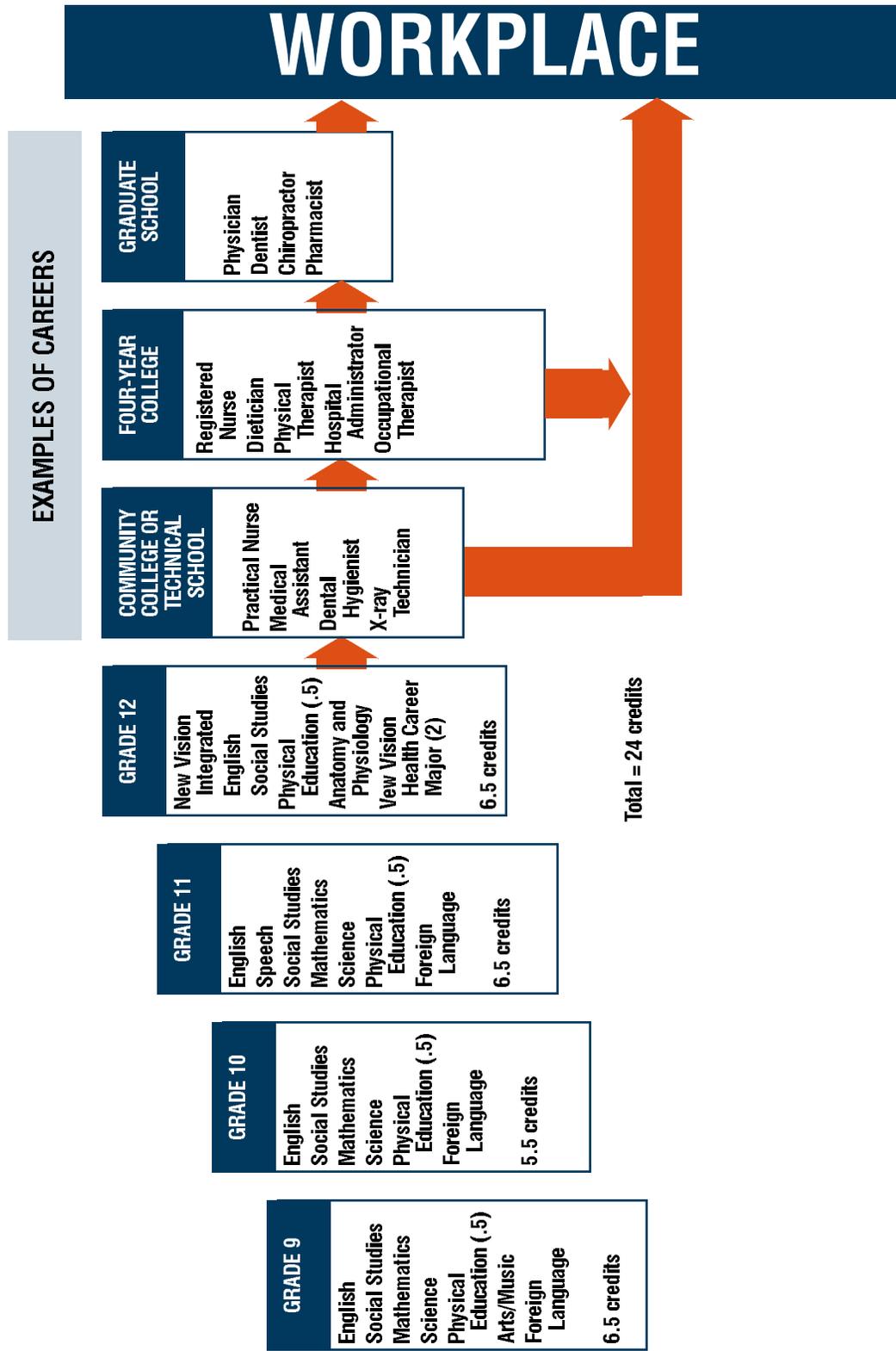
New York State Career Major Area: Engineering/Technologies

Sample Four-Year Program



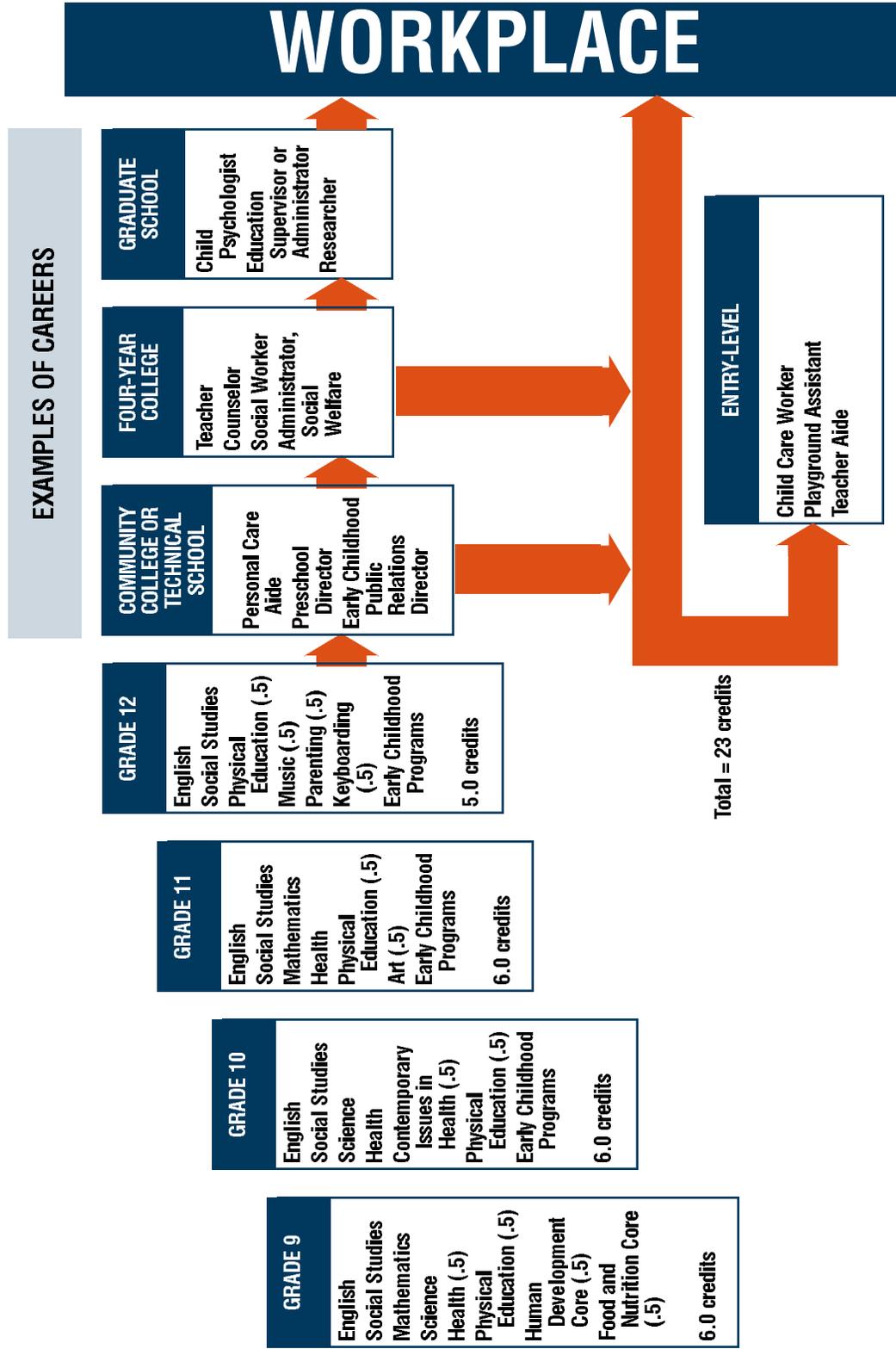
New York State Career Major Area: Health Services

Sample Four-Year Program



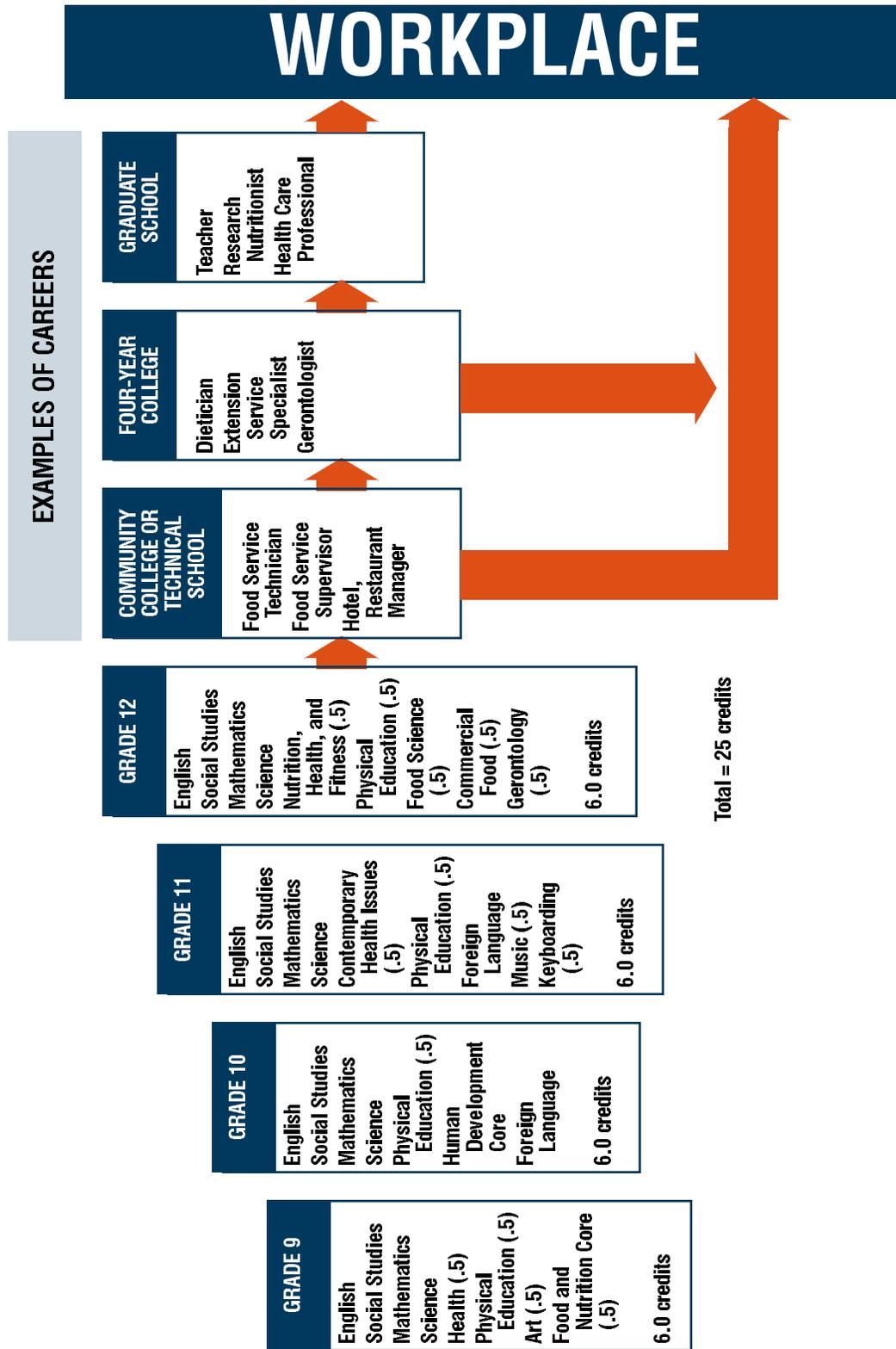
New York State Career Major Area: Human and Public Services

Sample Four-Year Program



New York State Career Major Area: Natural and Agricultural Sciences

Sample Four-Year Program



The Conventional Classroom Compared With The SCANS Classroom

From the Conventional Classroom	To the SCANS Classroom
Teacher knows answer.	More than one solution may be viable and teacher may not have it in advance.
Students routinely work alone.	Students routinely work with teachers, peers, and community members.
Teacher plans all activities.	Students and teachers plan and negotiate activities.
Teacher makes all assessments. Information is organized, evaluated, interpreted, and communicated to students by teacher.	Students routinely assess themselves. Information is acquired, evaluated, organized, interpreted, and communicated by students to appropriate audiences.
Organizing system of the classroom is simple: one teacher teaches 30 students.	Organizing systems are complex: teacher and students both reach out beyond school for additional information.
Reading, writing, and math are treated as separate disciplines; listening and speaking often are missing from curriculum.	Disciplines needed for problem-solving are integrated; listening and speaking are fundamental parts of learning.
Thinking is usually theoretical and “academic.”	Thinking involves problem-solving, reasoning, and decision-making.
Students are expected to conform to teacher’s behavioral expectations; integrity and honesty are monitored by teacher; students’ self-esteem is often poor.	Students are expected to be responsible, sociable, self-managing, and resourceful; integrity and honesty are monitored within the social context of the classroom; students’ self-esteem is high because they are in charge of own learning.

Source: *Learning A Living: A Blueprint For High Performance*, ASCANS Report for America 2000, published by The Secretary’s Commission on Achieving Necessary Skills, U.S. Department of Labor, April 1992.

Sample Local Curriculum

Locally-developed procedures for raising student achievement and improving professional practice are most effective when initiated by those who take ownership for implementation; developed in a culture of shared inquiry; and focused on a common mission that blends local needs with State and National policies and purposes.

As teachers plan and reflect with their students and each other on the best practices they can employ to illustrate the State standards, their work will include elements of planning, instructional design, assessment development, professional development, etc.

The following samples are representative of work now underway by teachers in New York State who are developing standards-based approaches to instruction.

Educators in the Genesee-Livingston-Orleans-Wyoming School to Work partnership have addressed the Career Development and Occupational Studies learning standards by creating an integrated school-to-work system that reaches all students. Their strategies incorporate career development, workplace competencies, and work-based learning into all levels of education. The following charts are a reflection of those strategies.



SUMMARY OF CURRICULUM DEVELOPED FOR ELEMENTARY (K-4)

Academic Area Grade Level(s)	Curriculum Description	Sample Activities	School District Representative
Math K-8	<i>Math Relevances</i> Learn math skills through problem-solving in coordination with local businesses	<ul style="list-style-type: none"> K and pre-1st: Learning graphing, whole numbers and solving word problems through visit to ice cream parlor 1st will learn measurements, etc., by visit to hardware store 	Attica Lori Orologio Linda Smith 716-591-0400
Math K-5	<i>Treasury of Moneyology</i> Multitude of multi-media resources to introduce and teach money and mathematics skills	<ul style="list-style-type: none"> Bank/School Partnership-personnel from Wyoming Bank will go to school and students will visit bank. Money skills: Students will learn to count, add, subtract, and figure sales tax. 	Wyoming Central School Linda Alrmetter 716-495-6222
Social Studies K-12	<i>Building Linkages Between School Community: ADOPT-A-BUSINESS</i> Create a link between the business community and school district to allow students to develop an appreciation for business community and allow business community to experience issues facing schools	K-6: Each grade level will adopt a community business	Mt. Morris Central School Rich Mlyniec 716-658-3331
Math Science Reading Computer Social Relations Grade 4	<i>Oliver's Candy Project</i> Students will identify the skills they might need in a job. They will understand managing resources and demonstrate interpersonal skills.	Students will brainstorm skills they need in a job. Students will hear presentation from Oliver's Chocolates. Students will visit Oliver's Chocolates. Students will discuss findings, follow recipe for making chocolate, run a mock store, design their own business, make a flowchart, show decision-making processes, and develop alternate strategies for problems. They will also make oral presentation.	Albion 716-589-7033

For more complete information, contact your liaison or School-to-Work Office.

Source: Batavia City Schools. Batavia, NY.

SUMMARY OF CURRICULUM DEVELOPED FOR MIDDLE SCHOOL (5-8)

Academic Area Grade Level	Curriculum Description	Sample Activities	School District
Math K-8	See <i>Math Relevance</i> Learn math skills through problem-solving in coordination with local businesses	<ul style="list-style-type: none"> • 5th will learn to write checks and keep ledger using void checks from local bank • 8th will learn to calculate interest for loans by visit to local bank 	Attica Lori Orologio Linda Smith 716-591-0400
Math K-5	See <i>Treasury of Moneyology</i> Multitude of multi-media resources to introduce and teach money and mathematics skills	<ul style="list-style-type: none"> • Bank/School Partnership • Money Skills 	Wyoming Linda Alrnetter 716-495-6222
Career Awareness	<i>Developing Career Awareness: Catching Your Dream</i> 1. Career Awareness Day for 5th graders 2. Video production for follow-up	Provide middle school students with a beginning study of self-awareness through Career Day with local businesses	Genesee Valley BOCES Deborah Leh 716-343-1400
Communication Skills Grade 5 and 6	<i>Middle School Newspaper</i> Provides forum for learning and practicing communication skills, both written and oral	<ul style="list-style-type: none"> • Introduction of newspapers • Modeling skills for Middle School Newspaper • Publishing of monthly middle school newspaper 	Pavilion Middle School Barbara Ellingham 716-584-3115

SUMMARY OF CURRICULUM DEVELOPED FOR MIDDLE SCHOOL (5-8), continued

Academic Area Grade Level	Curriculum Description	Sample Activities	School District
<p>Social Studies K-12</p>	<p><i>Building Linkages Between School Community: Adopt-A-Business Program</i> Create a link between the business community and school district to allow students to develop an appreciation for business community and allow business community to experience issues facing schools</p>	<p>7-9: Students will adopt an elementary school grade level and work with them and their adopted business</p>	<p>Mt. Morris Central School Rich Mlyniec Fran Smith Sharon Brown Diane Bedient 716-658-3331</p>
<p>Career Exploration Grade 5 and 6</p>	<p><i>School Supply Catalog Store</i> Enhance school to work experience and allow students to experience an awareness of the world of work, explore career options and related skills, aptitudes and abilities</p>	<ul style="list-style-type: none"> • Logo contest • Career options • Job Descriptions • Determine items to sell • Purchase inventory • Job applications/interview • Ad campaign • Job training/performance • Catalog order business • Training 5th graders • Future goals 	<p>Pavilion Middle School Sheila J. Stellrecht 716-584-3115</p>
<p>Business Grade 7</p>	<p><i>Business Awareness Project</i> Acquaint students with the ethics and values of the business community</p>	<p>Students will meet with department heads from Eli Atochem. Representatives from Eli Atochem will visit York Central. Students will visit Eli Atochem, meet and discuss their observations and develop portfolios that will include organizational flowcharts, videos, etc.</p>	<p>York Central School Lynda Lowe Hean Moose Joe Lentner Barb Higgins Jim Rogowski Patrisha Gallana Karen Bryant 716-243-2990</p>

SUMMARY OF CURRICULUM DEVELOPED FOR MIDDLE SCHOOL (5-8), continued

Academic Area Grade Level	Curriculum Description	Sample Activities	School District
<p>Career Exploration Grade 6</p>	<p><i>Appreciating Differences</i> Students visit Dogwood Day Treatment to gain personal experiences with people with differences</p>	<p>Reading/Language Arts Novel Unit for Citizenship/Disability Expectations for Disabilities Unit Make the Rights Choice! Handicapped Simulation</p>	<p>Dansville Middle School Jeannie Reakes 716-335-4010</p>
<p>Math Language Reading Social Skills Computer Art Study Skills 5-8</p>	<p><i>Student Store</i> Students will complete job application, participate in interview, create and follow schedule, maintain inventory, take money and make change, work as team, serve customers correctly, prioritize schedule, make high academic standards, and promote and advertise store</p>	<p>Students interested in working in the store will attend informational meeting, fill out application, have interview, provide references. After this process students will take inventory and set up store. Scheduling and training will be completed. Store will be promoted, Grand Opening will be held, sales and replenishment of stock will be monitored, weekly inventory and deposits of money will be conducted.</p>	<p>Albion Middle School Ralph Englert Mary Ann Jablonski Karen Spierdowis 716-589-7033</p>
<p>Life Skills Middle School</p>	<p><i>School-based Workshop</i> Students will demonstrate an awareness of different technology available, how technology affects society, demonstrate an understanding of how system performance relates to goals, need for data, select and communicate information, demonstrate an awareness of knowledge, skills, and resources needed to build simple item, and relate to people of different ages and diverse backgrounds</p>	<p>Class will visit ARC workshop for tour and presentation, decide on products to be sold, design and produce flyers for advertising, take orders for products, produce products by deadline, keep track of individual piecework, set up delivery system, collect and keep track of money collected, and teach social skills related to workplace.</p>	<p>Albion Middle School 716-589-7033</p>

For more complete information, contact your liaison or the School-To-Work Office.

SUMMARY OF CURRICULUM DEVELOP FOR HIGH SCHOOL (9-12)

Academic Area Grade Level(s)	Curriculum Description	Summary Activities	School District
Social Studies K-12	<i>Building Linkages Between School/Community: Adopt-A Business Program</i> Create a link between the business community and school district to allow students to develop an appreciation for business community and allow business community to experience issues facing schools	10-12: Students will serve as managers for process	Mt. Morris Central School Rich Mlyniec 716-658-3331
Language Arts 9-12	<i>Books on Tape Performance Task</i> Students will use language arts skills to plan, create and implement a promotional campaign to encourage their peers to become acquainted with Books on Tape (BOT) at Richmond Library	BOT Task 1 - student will design and create instructive tool for helping others become familiar with Books on Tape (BOT) section of Richmond Library; BOT Task 2 - student will produce an annotated bibliography; BOT Task 3 - student will produce a book review of one of the BOTs; BOT Task 4 - student will score their performance as a group; and BOT Task 5 - student will create, publish, and present promotional material that encourages peers to use BOT section of library	Batavia HS Elizabeth Francher 716-343-2480
Child-Elder Care Program Senior Students	<i>Workforce Preparation: Child Elder Care Project</i> Project redesigned classroom activities and projects so they directly relate to workplace applications	Classroom projects and activities include: Worksite Journal Writing Development of Learning Centers Writing Lesson Plans Demonstration of Lesson Plans Newsletters for Parents	Genesee Valley BOCES Ellen Bennett Janis Weaver 716-343-1400
Resume Portfolios Senior Students	<i>Resume Portfolios</i> Useful collection of students' work	Part I - resume, cover letter, evaluations, recommendations, etc. Part II - Certificates and awards Part III - work samples	Genesee Valley BOCES Ellen Bennett Janis Weaver 716-343 1400

SUMMARY OF CURRICULUM DEVELOPED FOR HIGH SCHOOL (9-12), continued

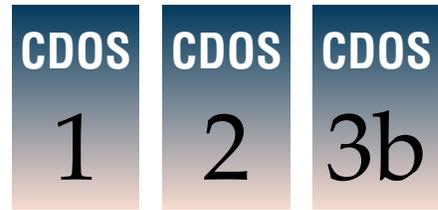
Academic Area Grade Level(s)	Curriculum Description	Summary Activities	School District
<p>Introduction to Occupations Grade 9 (mandated)</p>	<p><i>Introductions to Occupations</i> Career Exploration Model allows students to move beyond regular content to develop their occupational goals, personal goals, values, abilities, and desired lifestyles.</p>	<p>Modules will include: Module 1: Business and Community Module 2: Financial Resource Management Module 3: Career Exploration Module 4: Career Selection Process Module 5: Budgets, Savings, Checking Module 6: Job Acquisition Forms Module 7: External Influences Module 8: Federal & State Income Tax Preparation, Credit, and Installment Buying Module 9: Communications Systems Module 10: Job Adaptability Process Module 11: Smart Consumerism Module 12: Production Systems Module 13: General V Enterprises Module 14: General Job Shadowing</p>	<p>Mt. Morris Rich Mlyniec Jean Dutchess Craig King (716) 658-33</p>
<p>Technology Math Business Communications 9-12</p>	<p><i>Ergonomics in the Office Environment</i> Project divided into stages. so that knowledge of ergonomics will be gained through various lessons. Each stage interrelated. Students will work in all four areas to prepare for final project.</p>	<p>Examples of rubrics are Oral Presentation, Technical Narrative Group Dynamics, Original and Revised Floor Plan/Elevation, Survey, Chart, Graphs, Business Correspondence, Statistical Analysis-Measurement, Computation and Terminology, Portfolio Design, Annotated Photo Documentation, Self Assessment, and Daily Log</p>	<p>Warsaw Central School Ruthanne Vitagliano 716-786-8010</p>
<p>Engineering Industry Business Health Human Services Agriculture Natural Resources Fine Arts Communications Special Ed Grade 9</p>	<p><i>Career Clusters</i> Students will develop an awareness of the world of work, explore career options, and relate personal skills, aptitudes and abilities to future careers within each of the Career Clusters.</p>	<p>Examples include: 1. Students will develop an awareness of world of work, explore career options, and relate personal skills, aptitudes and abilities to future career decisions. 2. Identify educational requirements for various careers. 3. Students will develop an understanding that technology is the process and product of human skill and ingenuity in designing and making things out of available resources to satisfy personal and societal needs and wants. 4. Students will demonstrate interpersonal competencies which lead to good teamwork and cooperation in large and small groups. 5. Activities and evaluation methods on Career Cluster Curriculum for Special Education classes will be modified.</p>	<p>Albion HS Ada Grabowski 716-589-5644</p>

SUMMARY OF CURRICULUM DEVELOPED FOR HIGH SCHOOL (9-12), continued

Academic Area Grade Level(s)	Curriculum Description	Summary Activities	School District
Communi- cations Grade 12	<i>Career Search Research Project</i> Students research various jobs to determine education, nature of work, conditions, and salary	Students researched Fashion Designers, Free Lance Writers, Interior Decorating, Real Estate Agent, Paralegal, Business Teacher, Financial Services Broker	Batavia HS Sharon Messina 716-343-2480
Grade 11 and 12	<i>Job Acquisition Curriculum</i> The purpose of this project is to introduce the student to a process that almost ALL individuals will have to go through in their lives—the Job Acquisition Process	Aligning parts are: Career Development, Universal Foundation Skills/ Career Options; Job Acquisition, Job Leads; Letter of Application, the Resume, the Job Application; and the Interview	Notre Dame Wayne Lazewski Paul LaValley 716-343-2783
Accounting Applied Communi- cations Language Arts Grade 11 and 12	<i>Planning the Business Venture: Writing the Business Plan</i> Local businesses will be able to invest in students' projects; students will be asked to select a local business person whose enterprise most clearly resembles the kind of venture the student intends to design	The business plan will include a description of the business proposed, a consumer profile, a description of operations and schedules, a summary of loan expenditures, cash flow projections, and a description of the management. The completed plan will be published and bound as a professional quality document	Batavia Sharon Messina Elizabeth Fancher 716-343-2480
Introduc- tion to Oc- cupations 9-12	<i>School-to-Work Career Module</i> Provide the students the opportunity to enrich their career awareness and exploration	Content outline is: I. Relationship of Lifestyle to Career Choice II. Career Preparation III. Job Preparation IV. Job Shadow Experience	Avon Leigh Major Catherine Pospula 716-226-2455

For more complete information, contact your liaison or the School-To-Work Office.

Teachers in the Brewster Central School District have constructed a portfolio-based Home and Career Skills curriculum to address the standards found in Career Development and Occupational Studies. This sampling of tasks includes experiences in self-knowledge, life roles, educational development, and career exploration during the middle school years.



Grades 6-8

Program	Task	Standard	Skill
Work Ethic Program	<p>Students use time cards to “clock” in and out of class and get paid in Home and Career Skills, “dollars” for full periods of “work.”</p> <p>“Bonus Bucks” are given for exceptional work or attitude.</p> <p>Student “paymasters” collect time cards, keep accounts, and write out and return checks each week.</p> <p>Checks and bonus bucks are stored in “pay envelopes” attached to the student’s Home and Career Skills portfolio until the end of the quarter which forces the student into a weekly self-review of his portfolio.</p> <p>Students get “longevity” raises each year.</p>	CDOS 3a	Universal Foundation Skills
Decision-Making	<p>Study characteristics and steps in decision-making.</p> <p>Make group decision on recipe selection based upon list of restricted available resources.</p>	CDOS 3a	Universal Foundation Skills
Problem-Solving	<p>Study steps in problem-solving.</p> <p>Select typical teenage problem and apply steps.</p> <p>Write play that demonstrates problem selected and possible solutions. Videotape play for class viewing and evaluation.</p>	CDOS 3a	Universal Foundation Skills

Source: Brewster Central School District, Brewster, NY.

Program	Task	Standard	Skill
<p>Con-sumerism</p>	<p>Comparison of name brand and store brand products by blind testing for key factors.</p> <p>Label interpretation for product use and safety, ingredients, price, and nutritional value. Students then invent a new food product and create labels for it.</p> <p>Interpretation of consumer research publications. Students read about and report, both orally and in writing, on a product.</p> <p>Study supermarket industry and systems, layout of a typical store, and ways to save money when food shopping. Students create an accurate shopping list for an assigned menu.</p> <p>Examination of advertising techniques and psychology. Students create multiple ads for one product showing different techniques.</p> <p>Study of complaint resolution steps and strategies. Students write a letter of complaint about an assigned consumer problem.</p> <p>Students run own consumer study comparing home-made recipe to store products.</p>	<p>CDOS 2</p>	<p>Integrated Learning</p>
<p>Career Interest Inventory</p>	<p>Under the supervision of the Home and Career Skills teacher and the Guidance Counselor, who comes in to team teach this unit, the students take a self-administered interest inventory test.</p> <p>Students identify their highest scoring career clusters.</p> <p>Career clusters are examined for the elements they have in common and the skills required.</p> <p>Students identify their highest interest jobs/ careers within their selected clusters and examine the level of education recommended for those careers.</p> <p>Booklet is stored in the Part II portfolio to be worked on further in 8th grade.</p>	<p>CDOS 1</p>	<p>Career Development</p>

Program	Task	Standard	Skill
Money Management	<p>Students study various credit instruments and sources of credit. They explore characteristics lending institutions look for in issuing credit and problems that arise when credit is not used wisely.</p> <p>Students study how a checking account operates. Each student is issued a checkbook and register and a list of transactions. All transactions are to be completed and checkbook balanced.</p> <p>Students examine paycheck deductions and what deductions go towards.</p> <p>Students examine and evaluate various possible job benefits at different stages of the life cycle.</p> <p>Students study a variety of ways to save money and evaluate the benefits and drawbacks of each method. They calculate their present net worth by listing their current assets and liabilities.</p> <p>Students examine the insurance industry and consider various possible forms of insurance they may have to purchase in the future.</p>	CDOS 2	Integrated Learning
Budgeting	<p>Students select an entry level job from the local newspaper's employment ads and calculate what their take-home pay would be.</p> <p>Students estimate their flexible expenses for food, clothing, transportation, recreation, medical, etc., modified by any existing job benefits.</p> <p>Students estimate their fixed expenses for rent (taken from local newspaper rental ads), utilities, installment purchase payments, savings, etc.</p> <p>Students summarize their total expenses and compare them to income to see if they can stay within their budget, or if they must modify their expenses.</p>	CDOS 2	Integrated Learning
Post-secondary Educational Planning	<p>Students learn the statistics on skill levels required in the current job market and examine the options available for postsecondary education and training.</p> <p>Students learn about possible sources of financial aid for postsecondary education and the necessity of creating a budget to finance further education.</p>	CDOS 1	Career Development

Program	Task	Standard	Skill
Job Acquisition Skills	<p>Students learn to read employment advertisements and examine them for required skills and characteristics.</p> <p>Students select an ad for career employment that requires some postsecondary education.</p> <p>Students study interviewing skills and participate in a mock interview.</p> <p>Students learn how to fill out a job application and complete one for their selected job.</p> <p>Students study resume writing and create a personal resume using accurate personal data and projected educational and work experience.</p>	CDOS 1	Career Development
Career Search	<p>Using the Career Interest Inventory results from the previous year, students research their three selected jobs on the computer and through the Occupational Outlook Handbook.</p> <p>Students write an essay about their top career choice, examining required skills, educational level, desirable personal characteristics, outlook for employment, and match with interests and abilities.</p>	CDOS 1	Career Development
Entrepreneurship	<p>Students examine characteristics of successful entrepreneurs.</p> <p>Students brainstorm possible businesses they could start as a class and generate a list for market research.</p> <p>Students survey the school and public to select the business with the greatest chance for success.</p> <p>Students create a corporate structure and select division heads. They create a business plan and request a loan from the school.</p> <p>Students brainstorm and select a charity to benefit from any profits they may make.</p> <p>Students run business for several days, keeping accounts and paying back loan.</p> <p>Students close down business and give final report on results.</p>	CDOS 2 CDOS 3	Integrated Learning Universal Foundation Skills

Teachers in the Peekskill City School District have designed a portion of their curriculum to help students develop the fundamental concepts and skills which will prepare them for work and lifelong learning in the 21st century. The following examples identify the skills and activities used to master the universal foundation skills.

CDOS
3a

Resources

Skill	Activity
<p>Allocates Time: <i>Selects relevant, goal-related activities; ranks them in order of importance; allocates time to activities; and understands, prepares, and follows schedules.</i></p>	<ul style="list-style-type: none"> • Identifies long-term goals based on personal values. • Estimates/ revises time schedule required to complete a project. • Completes corporate tasks as scheduled.
<p>Allocates Money: <i>Uses or prepares budgets, including cost and revenue forecasts; keeps detailed records to track budget performance; and makes appropriate adjustments.</i></p>	<ul style="list-style-type: none"> • Demonstrates ability to accurately complete business-related math problems. • Prepares a personal budget that includes a savings plan. • Uses fiscal assessments to enhance consumer decision-making.
<p>Allocates Material and Facility Resources: <i>Acquires, stores, and distributes materials, supplies, parts, equipment, space, or final products in order to make the best use of them.</i></p>	<ul style="list-style-type: none"> • Prepares shopping list and schedule for production of corporate products. • Develops and evaluates menus. • Develops and implements storage plans.
<p>Allocates Human Resources: <i>Assesses knowledge and skills and distributes work accordingly, evaluates performance, and provides feedback.</i></p>	<ul style="list-style-type: none"> • Designs/implements a plan to attain personal goals based on human and economic resources. • Prepares a self-analysis in relation to a career path. • Develops a staffing plan. • Writes a job description. • Conducts a performance evaluation.

Information

Skill	Activity
<p>Acquires and Evaluates Information: <i>Identifies need for data, obtains it from existing sources or creates it, and evaluates its relevance and accuracy.</i></p>	<ul style="list-style-type: none"> • Researches the benefits and liabilities of labor union activities. • Conducts career research in the three vocational areas of business, food, and technology and prepares reports. • Listens to guest speaker(s) and completes an analysis and summary. • Completes a mosaic identifying personal values and interests. • Locates classified ad for job that matches personal profile. • Makes a mock purchase of stock and graphs a price chart for two weeks. • Presents an oral annual report (corporate). • From clippings from the financial section of local newspaper, highlights “new” industry that will mean additional jobs.
<p>Organizes and Maintains Information: <i>Organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion.</i></p>	<ul style="list-style-type: none"> • Demonstrates knowledge of channels of distribution (buying and selling) by preparing the following documents: purchase order, bill, or lading invoice. • Prepares personal and corporate checkbooks with deposit tickets and check registers. • Reconciles a bank statement.
<p>Interprets and Communicates Information: <i>Selects and analyzes information and communicates the results to others using oral, written, graphic, pictorial, or multi-media methods.</i></p>	<ul style="list-style-type: none"> • Completes a job application/ resume. • Identifies the difference between needs and wants when making purchases over a life cycle. • Explains the use of equipment and utensils, including proper care and storage. • Prepares a mailable letter of complaint, showing knowledge of consumer rights. • Completes a sales contract. • Develops a reference referral form. • Prepares a credit card application, demonstrating knowledge of credit rights and responsibilities. • Prepares a loan application. • Prepares a 1040EZ income tax form from “wages” earned as Workforce 2000+ corporate worker. • Writes a report on stock evaluation. • Analyzes the use of various products/ preparation methods (with regard to quality and use of time, energy, and money). • Interprets information provided on consumer labels.

Skill	Activity
	<ul style="list-style-type: none"> • Conducts a worker (relative, parent) interview to determine job duties, education, preparation, opportunities, advantages, and limitations. • Participates in field trip to a manufacturing business. • Researches a particular mechanical fastening technique and completes a fact sheet on the advantages and limitations of the fastener. • Prepares reports on raw materials. • Plans and makes oral presentation (with group) using visuals. • Prepares mailable letter of application.
<p>Uses Computers to Process Information: <i>Employs computers to acquire, organize, analyze, and communicate information.</i></p>	<ul style="list-style-type: none"> • Uses spreadsheet in preparing a budget. • Prepares a business budget. • Prepares corporate annual report.

Interpersonal

Skill	Activity
<p>Participates as a Member of a Team: <i>Works cooperatively with others and contributes to group with ideas, suggestions, and effort.</i></p>	<ul style="list-style-type: none"> • Demonstrates use of the five communications skills in employer/employee relationships. • Participates in a mock stockholders meeting. • Collaborates with group members to solve a problem. • Develops strategies for accomplishing team objectives. • Works through a group conflict situation.
<p>Teaches Others: <i>Help others learn.</i></p>	<ul style="list-style-type: none"> • Prepares and explains a collage on nutritional topics. • Conducts and reports on a market survey of proposed food products for corporate sales. • Trains a colleague on-the-job. • Explores possible solutions to a problem in a formal group situation.
<p><i>Serves Clients/Customers:</i> Works and communicates with clients and customers to satisfy their expectations.</p>	<ul style="list-style-type: none"> • Conducts a market survey regarding a proposed working model; and conducts interviews and gathers data about consumer demand, product feasibility, and product design. • Plans an advertising campaign for the production company, showing the six techniques used to persuade a consumer. • In a group, prepares radio advertisement, television commercial, and poster. • Deals with a dissatisfied customer in person (role play).

Sample Local Curriculum		E Elementary	I Intermediate	C Commencement
Skill	Activity			
<p>Exercises Leadership: <i>Communicates thoughts, feelings, and ideas to justify positions; and encourages, persuades, convinces, or otherwise motivates an individual or group, including responsibly challenging existing procedures, policies, or authority.</i></p>	<ul style="list-style-type: none"> • Uses specific team-building strategies in a work group. • Selects and uses an appropriate leadership style for different situations. • Uses effective delegation techniques. 			
<p>Negotiates: <i>Works towards an agreement that may involve exchanging specific resources or resolving divergent interests.</i></p>	<ul style="list-style-type: none"> • Develops an action plan for corporate negotiations. 			
<p>Works with Cultural Diversity: <i>Works well with men and women of varied ethnic, social, and educational backgrounds.</i></p>	<ul style="list-style-type: none"> • Demonstrates an understanding of how people with differing cultural/ethnic backgrounds behave in various situations (work, public places, and social gatherings). • Demonstrates the use of techniques for resolving conflicts. 			

Systems

Skill	Activity			
<p>Understands Systems: <i>Knows how social, organizational, and technological systems work and operates effectively within them.</i></p>	<ul style="list-style-type: none"> • Answers interview questions (in writing or orally) appropriately. • Applies bookkeeping procedures to preparation of a business payroll. • Demonstrates and uses safety practices to prevent accidents. • Demonstrates how to prevent food-borne illnesses. 			
<p>Monitors and Corrects Performance: <i>Distinguishes trends, predicts impact of actions on system operations, diagnoses deviations in the function of a system/organization, and takes necessary action to correct performance.</i></p>	<ul style="list-style-type: none"> • Demonstrates how resources change over time and are influenced by goals, needs, and availability. 			
<p>Improves and Designs Systems: <i>Makes suggestions to modify existing systems to improve products or services, and develops new or alternative systems.</i></p>	<ul style="list-style-type: none"> • Develops monitoring processes (quality control). 			

Technology

Skill	Activity
<p>Selects Technology: <i>Judges which set of procedures, tools or machines, including computers and their programs, will produce the desired results.</i></p>	<ul style="list-style-type: none"> • Produces corporate products: serving tray, plant hanger, and/or metal pan. • Prepares and evaluates recipes and products.
<p>Applies Technology to Task: <i>Understands the overall intent and the proper procedures for setting up and operating machines, including computers and their programming systems.</i></p>	<ul style="list-style-type: none"> • Prepares and evaluates products for use in corporate sales. • Demonstrates basic techniques used to prepare corporate products. • Demonstrates knowledge and preliminary skill in the operation and/or use of equipment. • Builds a “competitive engineering project.” • Demonstrates ability to injection mold. • Produces a vacuum formed object. • Uses CAD to design/develop product.
<p>Maintains and Troubleshoots Technology: <i>Prevents, identifies, or solves problems in machines, computers, and other technologies.</i></p>	<ul style="list-style-type: none"> • Follows rules for use of equipment. • Follows safety checklist.

Sample of Local Curricula: Logistics Operations/Management



The Business and Marketing Education Department at Norman Thomas High School in New York City has organized their *Logistics Operations/Management* career major program around the skills associated with the State standard/performance indicators outlined in the Business/Information Systems section of *Standard 3.b – Career Majors*. In addition, the locally-developed curricula reinforces many of the skills associated with *Standard 1 – Career Development*, *Standard 2 – Integrated Learning*, and *Standard 3.a – Universal Foundation Skills*.

The Council of Logistics Management defines logistics as “the process of planning, implementing, and controlling the efficient, effective flow and storage of goods, services, and related information from point of origin to point of consumption for the purpose of conforming to customer requirements.” The objectives of the program at Norman Thomas are to provide students with the basic skills and competencies necessary to obtain an entry-level job in the logistics career field and, also, to prepare them for successful study in a logistics operations/management postsecondary-level program.

The following curricula content were developed by the faculty of Norman Thomas High School with assistance and input from postsecondary education representatives, members of the New York City business community, and representatives from the New York City Roundtable of the Council of Logistics Management. The program is supported by other course work in business/marketing, computer technology, math, science, social studies, English, foreign language, etc.

Source: Norman Thomas High School, New York City, NY.

Introduction to Global Trade

- Content Outline - (one unit)

1

- Module 1: The Basics of Logistics
- A. The Business Office Environment
 - B. Introduction to Work Relationships
 - C. Communications in Business
 - D. Business Meetings
 - E. Basic Economic Understanding
 - F. Introduction to Exporting and Importing

2

- Module 2: Transportation
- A. History
 - B. Logistics Vocabulary/Terms
 - C. United States and Metric Measurements
 - D. Ground Transportation
 - E. Air Transportation
 - F. Ocean Transportation
 - G. Postal Service
 - H. Storage Facilities
 - I. Criteria for Selecting Transportation Services

3

- Module 3: Finance
- A. Commercial Banks
 - B. How Banks Assist Logistics Customers
 - C. Payment Methods/Terms

4

- Module 4: Important Skill Areas for a Logistics Career
- A. Human Relations
 - B. Attitude
 - C. Self-Esteem
 - D. Personal Appearance
 - E. Initiative
 - F. Creativity
 - G. Confidence/Assertiveness

5

- Module 5: Principles of Marketing, Exporting, and Importing
- A. Marketing
 - B. Exporting
 - C. Importing

6

- Module 6: Government and Logistics
- A. Government Objectives
 - B. Trade Strategies

7

- Module 7: Enhancing Human Relations-Related Skills for Logistics Employees
- A. Human Relations
 - B. Feedback
 - C. Organization Skills
 - D. Acting Responsibly
 - E. Goal Setting

8

- Module 8: The Future
- A. Reasons for Change
 - B. Electronic Data Interchange (EDI)
 - C. Value Added
 - D. Satellite Tracking
 - E. North American Free Trade Agreement (NAFTA)
 - F. Your Career in Logistics

Logistics Management

- Content Outline - (one unit)

1

- Module 1: Introduction to Logistics Operations and Management
- A. Basic Terms/Definitions
 - B. The Evolution of Logistics
 - C. Logistics Infrastructure/Activities
 - D. Relationships to Other Business/Marketing Functions and Activities
 - E. Current Trends in Supply-Chain Management

2

- Module 2: Procurement Management
- A. Purchasing Basics
 - B. Purchasing Cycle
 - C. Suppliers

3

- Module 3: Packaging and Materials Handling
- A. Principles of Packaging
 - B. Materials Handling

4

- Module 4: Warehousing Activities
- A. Objectives of the Warehousing Function
 - B. Menu of Services
 - C. Warehouse Equipment
 - D. Cost Components

5

- Module 5: Inventory Management
- A. Production Support
 - B. Finished Goods
 - C. Inventory Operations
 - D. Cost Components
 - E. Inventory Tracking Systems
 - F. Stockkeeping Principles
 - G. Reordering
 - H. Inventory Review/Reduction

6

- Module 6: Transportation Management
- A. Physical Distribution Methods/Media
 - B. Documentation and Contracts
 - C. Equipment

7

- Module 7: The Customer Service Function
- A. Strategy
 - B. Performance
 - C. Infrastructure
 - D. Measurement

Interdisciplinary Instructional Strategies

Following are four sample interdisciplinary instructional strategies collaboratively developed by a business/marketing teacher, an English teacher, a social studies teacher, and a foreign language teacher.

1 Instructional Strategy for use in a business/marketing class:

Take the class on a field trip to one of New York City's three major airports to observe and learn about air freight/cargo systems.

2 Instructional Strategy for use in an English class:

Have students read the book *Power Shift* and then write a report and deliver an oral presentation about how technology will change logistic operations/management in the future.

3 Instructional Strategy for use in a social studies class:

Assign students to role-play economic advisors to the President and suggest strategies for correcting the United States trade imbalance with Japan.

4 Instructional Strategy for use in a foreign language class:

Have students develop a list, in the language they are studying, of the products that are exported and imported by that country.

New Vision Health Exploration Program

New Vision is an exciting new approach to program delivery for eligible high school seniors. It provides an in-depth overview of a chosen professional field by placing the student in an actual work environment. New Vision successfully integrates senior English, Anatomy and Physiology and Social Studies into a meaningful curriculum based on the career interest of health care. It provides a sense of closure to the senior year and a directed transition to postsecondary education.



Key Program Elements

1. Location - Classroom is strategically located in the Veterans' Administration Medical Center in Syracuse.
2. Interdisciplinary Approach - Students study senior level English and Social Studies within the context of the course curriculum. This relates their academic knowledge to health careers.

Program Objectives

The student will:

1. apply previous and new academic knowledge and skills to professional situations
2. expand and apply both written and oral communication skills to effectively communicate with persons outside their peer group
3. improve ability to problem solve and think critically
4. develop career plans based on experiential learning
5. begin the transition from high school to college education.

Student Eligibility

The New Vision students must:

1. be a senior from a component high school
2. have met graduation requirements prior to acceptance into the program
3. have demonstrated an interest and desire to enter a health career
4. be academically capable of postsecondary education in a health career
5. exhibit a high level of responsibility and maturity, with the ability to work in a team as well as individually
6. be conscientious and highly motivated to succeed.

Source: Onondaga, Cortland, and Madison Counties BOCES, Syracuse, NY.

New Vision Health Careers Curriculum

Integration of Government and Economics

- | | | |
|------------|------------------------------------|--|
| 1. | History of Health Care | |
| 2. | Health Care Systems | Health Care Facilities
Organizational Structure
Insurance Plans |
| 3. | Trends in Health Care | Health Care Reform
Cost Containment
Diagnostic Related Groups
Homecare |
| 4. | Health Career Search | Qualities of Health Care Worker
Health Career Opportunities
Prerequisites for Health Career Education
Shadowing Experiences |
| 5. | Related Microbiology | Asepsis
Universal Precautions |
| 6. | Legal and Ethical Responsibilities | |
| 7. | Promotion of Safety | |
| 8. | Medical Terminology | |
| 9. | Communication Skills | Oral
Written
Computer |
| 10. | Human Growth and Development | |
| 11. | Nutrition | Normal
Therapeutic |
| 12. | First Aid and CPR | |

New Vision Social Studies Curriculum/Activities

Participation in Government

- 1.** Fundamentals of Government
 - Forms of Governments
 - Business, Local, State, Federal, and International
 - Roles of Government
 - Rights of Citizens (Bill of Rights versus Patient's Rights)
 - Financing Government - Taxes

- 2.** Government Regulations for Medical Facilities
 - Medical Ethics (Confidentiality, Patient's Rights, Biogenetics, and Transplants)
 - Legal Aspects (Professional Liability and Ethical Committee Decisions)
 - OSHA Regulations
 - Euthanasia

- 3.** Global Issues
 - Gaia's Principle (Macrocosmos and Human Microcosmos)
 - Human Responsibilities
 - Population Control
 - Famine
 - AIDS Pandemic

- 4.** Current Issues
 - Violence
 - Hepatitis B
 - TB Outbreaks
 - Right to Die

- 5.** Methods
 - Speakers/VAPresentations
 - Immersion with VAMedical Center Staff
 - Current Events Discussions
 - Reports
 - Worksheets
 - Opposing Viewpoints
 - Comparison of Medical and World Historical Events

New Vision Social Studies Curriculum/Activities

Economics

1. Fundamentals of Economics
 - Scarcity
 - Opportunity Cost and Trade-Offs
 - Productivity
 - Economic Systems
 - Economic Institutions and Incentives
 - Exchange Money and Interdependence

2. Microeconomic Concepts
 - Markets and Prices
 - Supply and Demand
 - Competition and Market Structure
 - Income Distribution
 - Market Failures
 - Government Role

3. Macroeconomic Concepts
 - Gross National Product
 - Aggregate Supply and Demand
 - Unemployment
 - Inflation and Deflation
 - Monetary and Fiscal Policy

4. International Economic Concepts
 - Absolute and Comparative Advantage and Barriers to Trade
 - Balance of Payments and Exchange Rates
 - International Growth and Stability

5. Measurement Concepts
 - Tables
 - Charts
 - Graphs
 - Ratio and Percentages
 - Averages

6. Economic Impact of Current Events
 - NAFTA
 - Health Care Reform
 - Stock Market Fluctuations

7. Methods
 - Personal Budget Planning
 - Hospital Budget Projects
 - Opposing Viewpoint Debates
 - Stock Market Game
 - Periodical Reviews
 - Speakers

New Vision Integration of English Curriculum/Activities

Writing, Reading, Listening, Speaking

1. Time Management Unit
Textbook Analysis
Note Taking Methods
Assignment Planning

2. Daily Journal
Narrative Account of the Day
Explanation of Technical Data Acquired
Self Expression of Experience

3. Monthly Book Reports
Selections must include:

Self Improvement	Novel
Medical Ethics	Nonfiction
Autobiography	Cultural Diversity
Biography	Literature
Current Event Topic	Periodical Review

4. Written Assignments
College Level Anatomy and Physiology Workbook
Weekly Clinical Objectives
Book Reports
Major Senior Term Paper
Persuasive Essays
Critical Thinking Essays

5. Debates
Moral and Ethical Issues in Medicine

6. Current Events
Issues of Medicine, Economics, and Government Discussed

7. Interaction One-on-One with Hospital Staff
Interviews of Professionals
Observations in Hospital Services

8. Medical Terminology / Abbreviations
Weekly Written Tests

9. Films

10. Library Skills
Students' Orientation and Use of SUNY Medical Library

11. Cooperative Learning Groups
Stock Investment Activity
Assignments on Research

12. Computer Skills
Integration of Computers in Class and Hospital Experiences

13. Senior Research Paper
Research
Composition
Defense Presentation

14. Recruitment Presentations
Prepare and Give Presentations to High School Junior Class

15. Portfolio Development

New Vision Curriculum For Anatomy and Physiology

Unit I - Science Interrelationship

- A.** Chemistry
 - Organic versus Inorganic
 - Matter
 - Physical and Chemical Change
 - Homeostasis

- B.** Physics
 - Newton's Law
 - Energy
 - Nuclear

- C.** Microbiology
 - Organism Classifications
 - Disease Process
 - Pathogen Control

Unit II - Body Organization

- A.** Basic Structures
 - Components/Units of the Body
 - Planes, Directions, and Cavities

Unit III - Anatomy, Physiology, and Pathology

- A.** Body Systems
 - Integumentary
 - Skeletal
 - Muscular
 - Circulatory
 - Lymphatic
 - Nervous
 - Special Senses
 - Respiratory
 - Digestive
 - Excretory
 - Endocrine
 - Reproductive

Sampling of Internet Sites Related to the CDOS Standards

The Internet sites listed below represent a sampling of sites related to the State standards in Career Development and Occupational Studies. The sites are included for informational purposes only. They are not intended as an endorsement by the New York State Education Department.

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- CDOS Website <http://www.nysed.gov/workforce/cdos.html>
 - NYS School-to-Work <http://www.nysed.gov/workforce/stw.html>
 - Federal School-to-Work Internet Gateway <http://www.stw.ed.gov/>
 - United States Department of Labor <http://www.dol.gov>
 - Training Technology Resource Center U.S. Department of Labor <http://www.wdsc.org>
 - Career and Technology Studies <http://ednet.edc.gov.ab.ca/cts>
 - Instructional Materials Laboratory <http://riker.ps.missouri.edu/DH/IML/>
 - National Center for Research in Vocational Education <http://vocserve.berkeley.edu>
 - United States Department of Education <http://www.ed.gov>
 - American Vocational Association <http://www.avaonline.org>
 - Vocational Industrial Clubs of America (VICA) <http://www.vica.org>
 - Association of Marketing & Management Studies (DECA)
 - State Website: <http://members.aol/nydeca1996/index.html>
 - National Website: <http://www.deca.org>
 - Future Business Leaders of America (FBLA) <http://www.fbla-pbl.org>
 - Future Homemakers of America (FHA) <http://users.aol.com/arains0418/fhahmpg.htm>
 - Health Occupations Students of America (HOSA) <http://www.hosa.org>
 - Technology Student Association (TSA)
 - State Website: <http://www.nyssi.org>
 - National Website: <http://www.tsawww.org>
 - Future Farmers of America (FFA) <http://www.agriculture.com/contents/FFA/index.html>
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